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Railway Age

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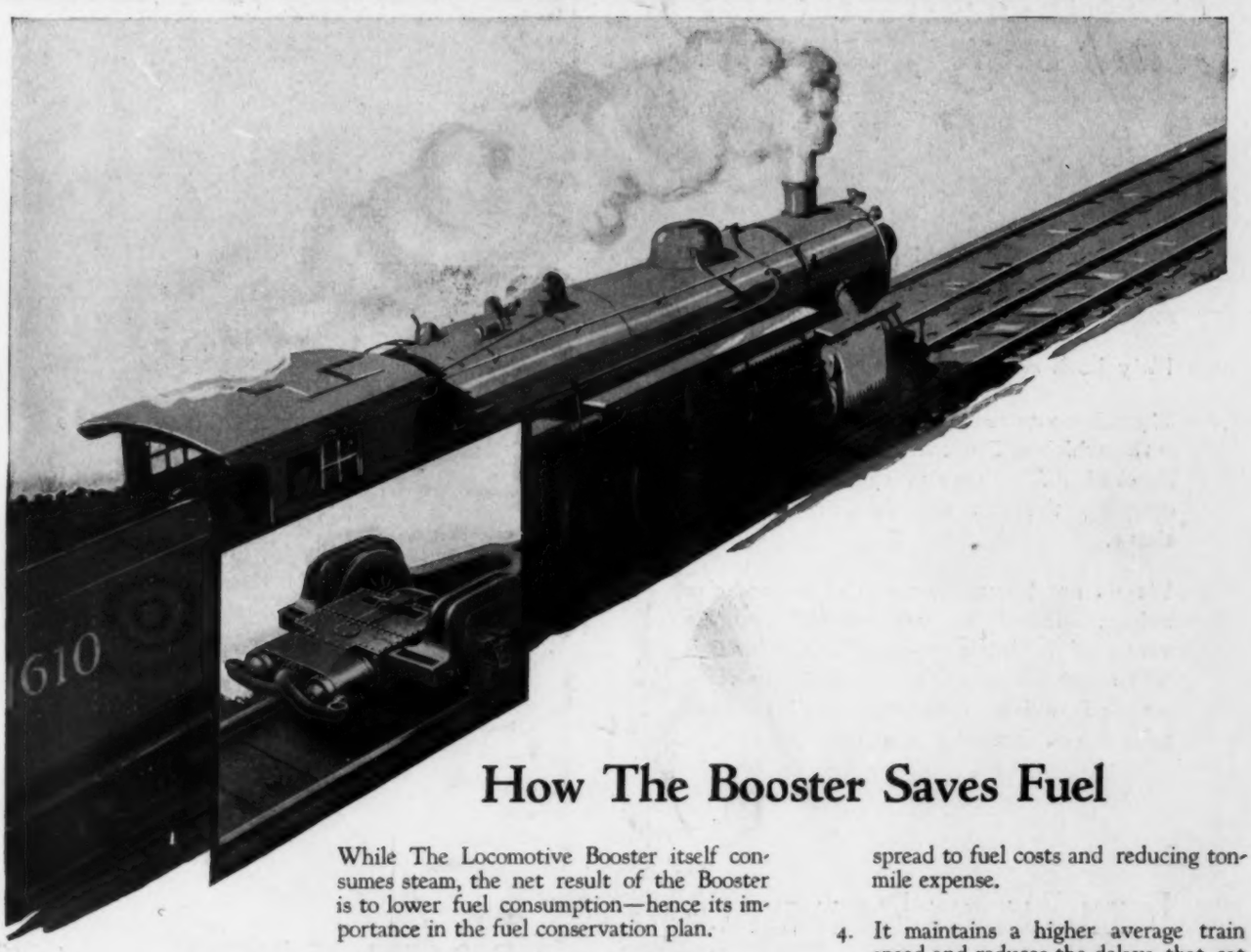

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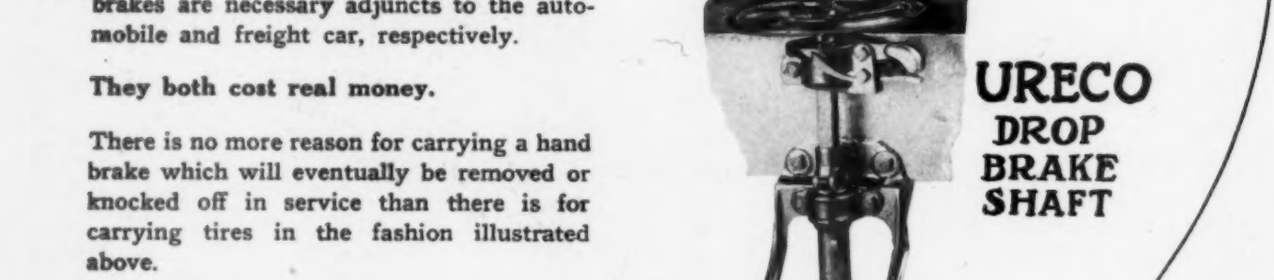

EDITORIAL

Railway Age

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The National Industrial Traffic League

The meeting of the National Industrial Traffic League in New York City last week was notable for its large attendance and for the very careful attention —enthusiasm, in fact—with which the principal topics were followed by the whole gathering. The speaking was by a few, comparatively, as is generally the case in such gatherings; but the responses, in the voting, indicated that not a single member was inattentive. The discussion which resulted in an order to support the Interstate Commerce Commission in its quest for an appropriation adequate to the carrying out of all of its plans indicated a determined and intelligent purpose which evidently is country-wide; and the action on Section 15a of the Transportation Act, opposing any modification at the present time; and on the Howell-Barkley bill, evidencing a clear understanding of its vicious features, showed that the mercantile community, as represented in this body, is thoroughly independent and level-headed on the transportation issues which are now before Congress and the Interstate Commerce Commission. Indeed, the truly representative character of its membership is the distinguishing characteristic of the League; and those railroad officers who sit in conferences with League committees will doubtless testify that the members are notable also for their thorough knowledge of transportation problems and their ability to deal with them from the broadest standpoint of public policy.

Summing Up Competition on Co-operation

Early this year the *Railway Age* announced a competition for articles on the best methods for bringing about co-operation between the railways and their employees to promote efficiency. We were almost deluged with contributions. Weeks were required in which to digest this material and reach a decision as to the two prize winners. The judges when they finished their task insisted that they be allowed to retain the copies of the manuscripts which had been referred to them, E. K. Hall, vice-president of personnel and public relations, American Telephone & Telegraph Company, remarking that the material in these contributions and the picture which they presented of the human relations in the railway field, were invaluable. We have tried to pass some of these good things on to our readers by publishing such of the articles as we could find space for in recent months. Several manuscripts which are noteworthy because of the original material and constructive suggestions which they contain, have been held back, but we hope to give them to our readers in the coming months. Meanwhile, we have been extremely fortunate in getting Dr. Henry Clayton Metcalf, director of the Bureau of Personnel Administration, and one of the judges in the competition, to prepare a series of three articles, in which he makes an analysis of the suggestions which were made in the 372 essays, points out the significance of the recommendations calling for the adoption of a modern personnel administration, and presents some pressing questions regarding the employee representation movement. Recent years have marked an increasing understanding in the industrial and transportation fields of the importance from an economic, as well as other standpoints, of improving human relationships within the organizations and inducing a greater spirit of co-operation to the mutual advantage of all concerned. Dr. David Friday made an address at the Seventh Annual Industrial Conference at Silver Bay, N. Y., last August on "Prosperity—A Problem of Relations." In commenting upon the remarkable improvement from the business depression of 1921, he made this significant statement: "I am one of the people who believe that a new relation between employee and employer, a new attitude, was one of the principal reasons prosperity returned two years sooner than it otherwise would have."

A Near-Wreck at a Protected Crossing

Last week a watchman at a crossing protected by gates got excited on the approach of a train and lowered the gates while the crossing was occupied by three motor vehicles—one of them a bus with more than 20 passengers. Fortunately the drivers of the cars kept their heads and managed to maneuver their cars to safety—except the bus which was grazed by the train but was not seriously damaged, and no deaths or serious injuries resulted. Crossing gates are generally of rather flimsy construction, and necessarily so as long as they are so designed to make it possible for a careless or excited watchman to close off vehicles between them. Yet every railroad man knows that automobiles which crash into crossing gates generally do so not in getting *off* a crossing but to get *onto* it. Plainly what is needed is a gate strong enough to bar the crossing effectually to vehicular traffic and one which, at the same time, cannot be closed to trap highway vehicles on the crossing. Can such a gate be designed and, if so, would its application be practicable? Certainly accidents which have occurred or have been but narrowly averted during the past few weeks at crossings protected by gates suggest the advisability of some improvement in the degree of protection which they afford, both to highway vehicles and to trains as well—for every automobile which a train hits is a potential, and often an actual, train-wrecker.

Motive Power Assignment to Divisions

In securing the most economical and effective use of motive power it is important to assign locomotives of the same class or at least a restricted number of classes, to a division or district for which they are best suited. The individual characteristics of the locomotives must be considered, also the class and volume of business and any unusual local conditions which may affect the operation of the power. The general truth of the above statement is admitted and yet it is doubtful if the motive power assignment on any one division ever complies with this principle fully. In view of constantly changing conditions a frequent reconsideration of locomotive assignment is usually advisable. The significance of this subject is indicated by the fact that it was stressed by both W. F. Thiehoff, general manager of the Burlington, and E. B. Hall, superintendent of motive power of the Chicago & North Western, at the Western Railway Club meeting

reported in last week's issue. Referring to the policy of assigning locomotives to the division for which they are best adapted, Mr. Thiehoff said, "This will enable the mechanical department to reduce to a minimum repair parts to be carried in stock, and give opportunity for hostlers, supply men, enginehouse employees, mechanics and foremen to become entirely familiar with the maintenance needs of the particular class, so that work can be done more expeditiously, efficiently and economically. This should apply to passenger, freight and yard locomotives as classes. A more uniform road performance may be had when enginemen and trainmen operate the same class of power, trip after trip, over the same territory, and yardmasters and yardmen, being familiar with a uniform capacity of locomotive, can plan their work better." It is doubtful if a more forceful summary of the advantages of this method of assigning power could be made. Another significant sentence from Mr. Thiehoff's address is as follows: "If one locomotive moves in the prevailing direction with less than its economical capacity load, the loss cannot be recovered. Overloading another locomotive in an effort to 'catch up' only magnifies the original error." The locomotive is far more expensive to purchase and operate as a motive power unit today than it was even a few years ago. It must be placed where it can be worked to the best advantage and loaded as nearly as possible to capacity.

Automatic Interlockings Prevent Train Stops

WITH THE USE of heavier power and the increase in train loading the delays to main line traffic caused by the necessity to "stop and whistle" at the crossings of branch lines are becoming a governing factor in rating locomotives and in the time required for the trip between terminals on many districts. Many crossings are so located with reference to grades that when heavy trains stop at a crossing they can start only with difficulty and frequently pull out a weak draw bar, tying up the line for an hour or more.

Heretofore the laws of certain states have required an interlocking plant with derails and complete signal protection for the protection of such crossings, if train stops are to be eliminated. During recent years there has been a growing sentiment among railroad officers that derails at crossings are more of a menace than a safeguard and in March, 1924, the Signal section of the American Railway Association recommended the elimination of derails. By eliminating derails an interlocking, consisting of signal protection, can be installed for approximately $6,000, depending on the types of construction and local conditions. Such a plant for a simple grade crossing can be controlled automatically by approaching trains, thereby eliminating the necessity for the service of levermen. On the basis of a plant of this character the installation of an automatic interlocking will effect a saving at many crossings of railways at grade.

The Great Northern has more than 25 automatic interlockings of this type is service, some having been in service for periods of over 10 years, and four having been completed during the current year. The Chicago & North Western, the Chicago, Milwaukee & St. Paul, the Minneapolis, St. Paul & Sault Ste. Marie and the Northern Pacific are some of the roads with joint crossings involved in these plants. Such satisfactory savings are being shown by the automatic interlockings in service on the Great Northern that an investigation is now being made of all non-interlocked crossings to determine a schedule of installation of automatic interlockings at the remaining crossings as rapidly as practicable.

These automatic plants are not considered as half-way protection for branch lines only but they have been proved to be adequate for all outlying crossings where there are no complications from passing tracks or other switches within the interlocking limits. In fact, the Great Northern has one automatic interlocking on its heaviest tonnage division. Other roads may well investigate the possibilities of automatic interlocking on their lines.

Commodity Prices and Freight Rates

THE REPORT of the Bureau of Statistics of the United States Department of Labor on wholesale prices of commodities in October, 1924, indicates that the relationship between the prices of the various groups of commodities, and also between them and freight rates, are now nearer what they were before the war than they have been at any time since this country entered the war.

It is a well-recognized fact that normal relationships between prices of different groups of commodities tend to promote lasting prosperity. When prices of some commodities are relatively very low, and prices of others are relatively very high, the ability of the producers of the commodities the prices of which are low to make normal purchases is seriously impaired. There can be no doubt that the relatively low prices of certain farm products which prevailed for years after the recession of business in the latter part of 1920 were a serious obstacle to the revival of prosperity and were one of the principal influences that caused the revival of business activity in 1923 to last only a short time.

In the accompanying table are given the index numbers of wholesale prices of groups of commodities as reported for October, the prices of the year 1913 being taken as 100 per cent. We have added to them a figure which shows that the average freight rate per ton per mile is approximately 152.4 per cent of what it was in 1913. This is based upon the average freight rate per ton per mile in August, 1924 the latest now available. The average freight rate was probably lower in October than in August.

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES
(1913 = 100.0)

Group	1924 October
Farm products	149.2
Foods	151.6
Cloths and clothing	188.4
Fuel and lighting	162.1
Metals and metal products	127.2
Building materials	170.7
Chemicals and drugs	132.2
House furnishing goods	171.0
Miscellaneous	119.8
All commodities	151.9
Average freight rate per ton mile	152.4

These figures indicate that as a result of recent advances in the prices of farm products they now have a power to purchase all other commodities which is 98 per cent as great as it was in 1913. The increase in the average wholesale price of all commodities is 99 per cent of the increase in the average freight rate, which means that taking commodities as a whole and the country as a whole all commodities at present wholesale prices will buy 99 per cent as much freight transportation as they would before the war.

The increase in the average wholesale price of farm products since 1913 is 91½ per cent as great as the increase of the average rate per ton per mile of the railways of the country as a whole. This statement, however, minimizes the present power of farm products to buy railway transportation. In the first place, the increase in freight rates upon farm products throughout the country has been somewhat

less than the increase upon other commodities. In the second place, most agricultural products are produced in the western and southern territories, and the average advance in rates has been less in those territories than in eastern territory. For example, the increase in the average rate of the western railways has been only 38 per cent. Therefore, farm products as a whole, on the basis of their present wholesale prices, have a power to purchase freight transportation on the western lines which is 108 per cent of their purchasing power in 1913, or 8 per cent greater than it was then. Likewise farm products as a whole have a greater power of purchasing freight transportation in the southern district than they had in 1913.

Despite the recent advances in the prices of many farm products there is still a demand for a general readjustment of freight rates which would reduce the rates upon farm products and advance the rates upon many other commodities. It may or may not be that such a readjustment should be made. It will, however, be found very difficult for its advocates to continue to base their advocacy of it upon the principal ground upon which they have based it in the past. It has been advocated chiefly upon the ground that the prices of farm products within recent years have been relatively lower than the prices of other commodities and that freight rates should be made to correspond to these relationships of prices. With farm prices now showing an advance 98 per cent as great since 1913 as commodity prices as a whole this argument has been greatly weakened if not destroyed. The claim is made by some that the recent advances in the prices of farm products are due to temporary causes and that when these causes are removed their prices will decline. This, however, is pure conjecture. It was also argued as recently as six months ago that the freight rates on farm products should be reduced because their prices were low and probably would continue to be low, and that contention has been shown by subsequent developments to have been without foundation.

The history of the last four and a half years demonstrates that to base freight rates upon prices which fluctuate constantly would be to base them on shifting sand. They should be made with reference to the average value of commodities for long periods, but if the policy were adopted of attempting to readjust freight rates in accordance with fluctuations in prices during short periods the entire freight structure would become chaotic. Shippers would never know what their freight rates were going to be. Railway officers could never have any definite idea as to what railway earnings were going to be.

How Wages May Be Increased

ORGANIZED LABOR in Great Britain is generally supposed to be considerably stronger than organized labor on this side of the Atlantic. In many respects this supposition is undoubtedly true, particularly from a political standpoint. Witness the recent still-birth of the "Progressive" party in this country as compared with the fact that until recently Great Britain had a labor government and that, in spite of the triumph of the Conservatives in the recent elections, the Labor party nevertheless secured over one-third of the popular vote.

But what is the purpose of the labor organization anyway? The obvious answer is: To secure more satisfactory wages and working conditions for the members. Logically then, British workmen, being organized into unions to a much larger extent than workmen over here, should be enjoying a much higher standard of living. What are the facts? We have before us tables issued by the British Ministry of Transport showing the wages of various classes of employees on the British railways for a week in March of this year. For purposes of comparison we selected certain classes of employees at random, turned their actual earnings for the week into American currency at par of exchange and multiplied the total by 4⅓ to put them on a monthly basis; then we set the totals down opposite the actual earnings for March of similar classes of employees in the United States as shown in the monthly wage reports of the Interstate Commerce Commission. The results of this comparison can be seen in the accompanying table.

Plainly the railway employee in England, in spite of the relatively greater strength of the unions, is only about one-half as well off as his American compeer. Strength of organization is apparently far from being the only factor in determining wages; militant unionism certainly is not the only method of securing a favorable standard of living. Apparently there is some force which bears on wages and which has far more to do with their determination than any pressure which organized labor is able to exert. Could anything be more clear than that this force is the degree of national prosperity? No matter what force organized labor may bring to bear, wages cannot, without killing industry, rise beyond the point where they would absorb profits sufficiently large to make enterprise attractive to capital. British industry has to compete in the foreign field with its products and if labor costs are too high this competition is unsuccessful, bringing a slowing down of trade and unemployment. And a job at unsatisfactory wages is much better than no job at all. Labor organized one hundred per cent cannot improve the condition of the workingman under such conditions. Improvement is impossible without greater national prosperity. Again we ask the question: What is a union for? And again we answer it: To increase the well-being of the worker—with the corollary, which must be clear to any one who will face the facts, that *the surest means of bringing increased wages is not, as is often supposed, by forcing from the employer a larger and larger share of the product of industry, but by doing everything possible to increase the total product of industry,* and thus the national prosperity. There is more meat in half a hog than in three-quarters of a squirrel.

Lately in this country in some unions, there has been a movement—tiny and feeble as yet to be sure—to join with employers in an attempt to secure greater efficiency. Likewise certain labor organizations have entered the banking field—which should ultimately give the membership a real stake which they can recognize in industrial efficiency in this country. We are glad to join with Professor Thomas N. Carver of Harvard University in the opinion that herein we

AVERAGE MONTHLY EARNINGS OF AMERICAN AND BRITISH RAILWAY EMPLOYEES COMPARED

	American railway employees—Average earnings for March, 1924 in dollars	Aver. monthly earnings of similar classes in England in dollars	Percentage relationship of British wage payments to American. Per cent.
Switchmen	165–196	57–79	35–40
Clerks	103–160	89	56–86
Enginemen	206–259	112	43–54
Firemen	154–193	83	43–54
Brakemen, flagmen and baggagemen	159–177	80	45–50
Track laborers	73– 75	59	79–81
Switchmen	165–196	57–79	35–40
Linemen	152	77	51
Yardmasters	257 }	118	46–81
Station agents	145–248 }		
Ticket collectors	193	71	37
Telegraphers	147	72	49
Hostlers (inside)	156	94	60
Machinists	160	77	48
Inspectors and foremen	171–213	137	64–80

*Average earnings for week ended March 29, 1924, turned into equivalent American money at par of exchange and multiplied by 4⅓ to put them on monthly basis.

†American occupational nomenclature used throughout.

have movements which promise far more for the ultimate well-being of organized labor than any political or economic solidarity which it is likely to achieve.

The Value of Portland Cement

THE FACT that the production and consumption of Portland cement in the United States for the current year is estimated at close to 150,000,000 bbl. affords a definite measure of the important place which this construction material has in our modern industrial life. Although recent celebrations mark the one-hundredth anniversary of the discovery of Portland cement, it was only within the last third of the century thus marked that its real development as an article of commerce and industry occurred. It was not until American Portland cement with its greater uniformity of quality replaced the natural hydraulic cements and caused concrete to become a formidable competitor of stone masonry and until the development of the art of reinforcement originated in France and led to forms of construction with this material that were utterly impossible with stone, that the real impetus was given to the use of cement in this country. Development followed two rather distinct lines of application, namely, fireproof building construction and bridge building, and it was in the latter that the railroads clearly exercised leadership in the creation of such new forms of construction as the reinforced concrete box culvert, the concrete trestle and the reinforced concrete pile, fully 15 years before highway construction was organized on a basis that permitted the adoption of anything other than the most primitive of methods. Within the last ten years this leadership has been transferred in some measure at least to the highway builders but the railroads still occupy an important place in the use of Portland cement and in the development of new fields for its usefulness.

However, entirely aside from any question as to the relative importance of the parts played by any of the users of Portland cement, it is to the industry itself that the principal credit must be given for the progress that has been made in the application of this material in the making of concrete, not only in the promotion of its use but in the development of a product of uniform quality and in the efforts being made to eliminate improper practice in its use. As a result of the united efforts of the manufacturers in their co-operation with the users the material now enjoys a remarkable diversity of application through which it exerts a profound influence along many lines. It has resulted in economy of construction by obviating the need of employing high priced stone cutters and masons. It is responsible for marked improvements in sanitation by its use in forms of construction which are inhibitive of the presence of rodents and vermin. It is effecting an enormous saving in the use of lumber by providing a more suitable building material for uses in which timber has an exceedingly short life. It has reduced fire hazards and has made possible permanent construction, under conditions where this was hitherto impossible.

In any field in which development is rapid it is to be expected that ill-advised if not entirely abortive undertakings should frequently find place. For example the efforts to replace the wooden cross tie, although undertaken fully 20 years ago, seem no nearer success today than at the outset. Failures have also been brought to light frequently as a result of improper methods or defective materials but these are but natural phenomena in any field of experimentation for it is largely through such failures that rules for good practice are developed. The history of the Portland cement industry comprises a record of remarkable success. Its future appears equally bright.

New Books

Principles of Railway Transportation. By Eliot Jones, Professor of Economics in Stanford University. 607 pages. Size 6 in. by 9 in. Bound in cloth. Published by Macmillan Company, New York.

This is one of the year's important railroad books. It is the sort of a volume that makes a railroad man who reads it realize how extensive, and of what high character is the literature on the subject of railway transportation.

The preface states that it is designed primarily to serve the needs of teachers of elementary courses in railway transportation. Professor Jones is favored by having a readable style of writing combined with which he shows a most praiseworthy understanding of the intricacies of his subject. He has written a book that is interestingly and understandingly done and which should serve a larger purpose than a text book alone.

This is not Professor Jones' first attempt at a railroad book. He is the author of "The Anthracite Coal Combination in the United States," published in 1914, which is properly classed as a railroad book since it deals with probably the most important phase of the history of the hard coal carriers. The book was originally undertaken as a thesis for the degree of Doctor of Philosophy at Harvard University. It still remains the authority on its subject.

Principles of Railway Transportation, the new book, is in six parts. Part I contains an introduction to the subject and goes into such details as the description of the various kinds of stocks, the purposes of various sorts of bond issues, etc., following which is a brief history of the railway expansion over the country. Part II deals with rates. Part III describes the development prior to the entrance of the United States into the World War of state and federal railway regulation through legislation, court decision and commission activity. Part IV discusses certain major problems, the several chapters dealing with the following subjects: Valuation and the fair rate of return; regulation of security issues; consolidations; service, including safety and safety legislation, car supply and the measures of operating efficiency, and, finally, labor disputes. Part V deals with the railroads during the war, one chapter with the activities of the Railroads' War Board, the other with the Railroad Administration. Part VI is entitled Railroads and Reconstruction. It details the discussion and the several plans which finally resulted in the Esch-Cummins Law, describes the provisions of the Transportation Act and concludes with a brief summary of what has taken place since the act has been in effect, particular reference being made to the activity of the new Railroad Labor Board. A feature of this part of the book is a 45-page chapter embodying an extended consideration of the advantages and disadvantages of government ownership and operation, properly included in this place because of the attention that was given the subject when the Transportation Act was in the formative period.

This description of the contents of the book will give an idea of its all-inclusive scope. That the author should have been able to effect an exhaustive and, at the same time, interesting treatment of such an extensive field is a tribute to his skill.

The chronological arrangement of the parts of the book as outlined above might lead one to think that the importance of the Transportation Act had been neglected through its relegation to the latter pages of the volume. It is important to note, therefore, that one does not have to wait until he has read Part VI and the description of the Transportation Act therein contained, to learn of the provisions of that act with reference to a particular subject that may have been dealt with earlier in the book. The problem thus offered of combining the background of a certain feature of regula-

tion with the ultimate or latest embodiment of it in legislation is a difficult one, but Professor Jones has done it well, without objectionable repetition, on the one hand, and with a complete picture of each feature on the other.

The chapter on Service in Part IV will be found of special interest. When a person outside of railroad circles seeks to discuss the measures of railway operating efficiency he is usually on dangerous ground in addressing his views to railroad men who know the pitfalls of railway statistical analysis. We like the way particularly in which the subject of car supply is discussed. Thus, Professor Jones does not content himself with pointing out that a car shortage may be due to insufficient equipment. He is careful to point out that the latter is only one of many possible causes. Among the many causes might be lack of cars in general; failure to utilize cars that are available through the failure of shippers to unload them properly, etc.; inadequacy of motive power; inadequacy of terminal facilities; improper car location, etc. Similarly there is comment about efficiency as reflected in heavier train-loads but there is also caution against regarding that as the only index. In other words, train speed and avoidance of train crew overtime must also be watched. These are in some respects small details in the big subject of "Principles of Railroad Transportation" but proper treatment of them is as good a test as any as to whether an author knows his subject and writes of it understandingly.

Professor Jones has not added any particularly new thoughts or new methods of approach to the subject of railroad regulation. Such, however, would not be the function of a book intended primarily as a text book.

Railroad Accounts and Statistics. By Charles E. Wermuth. 116 *pages, with appendixes* 349 *pages. Size* 6 *in. by* 9 *in. Bound in flexible leather. Published by Prentice-Hall, Inc.,* 70 *Fifth Avenue, New York Price* $4.00.

The Interstate Commerce Commission's classification of income, profit and loss, and general balance sheet accounts, the classification of operating revenues and operating expenses, the classification of investment in road and equipment, the classification of train-miles, locomotive-miles, and car-miles and the rules governing the separation of operating expenses between freight and passenger service are, of course, the basis of practical study of railway accounting. These classifications with supplements are to be secured from the Government Printing Office at a nominal cost. Unfortunately the government issues the several classifications in separate booklets so that there is a certain inconvenience that would be obviated were the classifications published in a single volume. The publishers of Mr. Wermuth's new book have happily realized this situation and have essayed to remedy it by assembling all five classifications between two covers instead of ten or more. The covers, furthermore, are flexible, which makes the book easy to handle. The text of the classification is set in larger type than that used in the government printing office copies of the classifications, making it easier to read.

In Mr. Wermuth's book the five classifications are shown respectively as Appendixes A, B, C, D, and E, occupying no less than two-thirds of the book. There is an introduction to the appendixes which occupies the other third—to be exact, 116 pages. This section apparently purports to be the book itself because it is in three parts, has chapters, etc. The 116 pages are not an inconvenience, however. They contain little of what a trained railway accounting officer would admit to be modern railroad accounting science and the newcomer to railway accounting work will not understand enough of what is said to be disturbed in his study of the classifications. Furthermore, there is much tabular matter in the form of account headings which appear in the classifications anyway and such forms as appear, while out of date, are so poorly drawn that their antiquity may pass notice.

We commend the publishers for their enterprise in furnishing this convenient compilation of the I. C. C. accounting classifications. We hope that if they publish a new edition they will attempt a more adequate explanation of the science of railroad accounts and statistics than is available in the 116 pages of text in the present volume. However, this book is a good purchase for anybody who feels extravagant enough to pay $4 for the copies of the I. C. C. classifications bound in flexible leather and printed in good type and who will not expect too much from the rather fruitless 116 pages of introduction.

Books and Articles of Special Interest to Railroaders

Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.

Books and Pamphlets

Commercial Information Services Handbook, compiled by Special Libraries Association. For organizations furnishing information about railroads, see Index under "Railroads," "Transportation," etc. Pub. by Special Libraries Association, New York.

Objectives in Commercial Engineering, by Glen Levin Swiggett. Report of 2d conference on business training for engineers and engineering training for business. U. S. Bur. of Education. Bulletin, 1924, No. 16. 66 p. Pub. by Govt. Print. Off., Washington, D. C. 10 cents.

Railway Map of the Dominion of Canada, 1924. Scale, 35 miles to an inch. 4 sheets each 28 inches by 52 inches which when joined form one map. Issued by Natural Resources Intelligence Service, Canadian Dept. of the Interior, Ottawa, Canada. 80 cents per set.

Periodical Articles

"Every Odd Section." The Northern Pacific Demands Its Pound of Flesh Close to the Heart of the National Forests," by Theodore M. Knappen. Northern Pacific land grants question. Map and Illustrations. Sunset Magazine, December, 1924, p. 10-13, 54-56.

How Trunk-Line Locomotives Are Kept Fit For Their Many Tasks, by Robert S. Skerrett. Illustrated with photographs showing compressed air tools in use in railway shops. Compressed Air Magazine, November, 1924, p. 1037-1043.

Kinks from a Texas Railway Shop, by Howard Campbell. Description of emergency tools at San Antonio shops of the Southern Pacific. American Machinist, November 20, 1924, p. 795-797.

Patrick Crowley Was 47 *Years on His Way to the Top,* by Bruce Barton. Career of president of New York Central. American Magazine, December, 1924, p. 16-17, 90-96.

The Problem of London Traffic by Sir Lynden Macassey. Inaugural address of president of Institute of Transport. Railways, p. 33. History of London traffic. Journal of the Institute of Transport, November, 1924, p. 7-40.

A Revolution in Refrigeration, by George Sanderson. Demonstration of carload of fish from Halifax to Montreal, under carbon dioxide gas. Canadian Magazine, November, 1924, p. 418-422.

The Storage and Handling of Fuel Oil in Industrial Plants, by C. G. Greenfield and H. H. Fleming. "In considering the capacity of tanks a consumer should not depend upon always being able to get the smaller-sized cars, nor should he install a tank which will hold only slightly more than a tank car, depending on a car to arrive in the yard just at the time the level in his tank has reached bottom." p. 771. Mechanical Engineering, Mid-November, 1924, p. 771-773.

Letters to the Editor

Flagging in Automatic Territory; Why Not?

HAILEYVILLE, Okla.

TO THE EDITOR:

There have been times in my experience as a train dispatcher when I thought I had made a mistake, and for an instant the cold chills would run up and down my back. When I read the article by J. Lowell White in the *Railway Age* of July 26 on, "Why Continue Flagging in Automatic Territory?" I had several of these chills; and I continue to have them every time I think of that article. One thing Mr. White has done, if nothing more; he has made a bold exposure of the cause of many collisions.

There is no such thing as divided responsibility in the performance of duty in this matter, if the book of rules counts for anything. Every man has his duty to perform, *individually*, and that duty is to be performed by him and no one else. The only thing wrong with the whole thing is that the officers do not make the fellow who thinks he can shift the responsibility, *toe the mark*. There is no reason why an engineer should not be made to observe and comply with the signal indication. Discipline will make them do it. When an officer finds any one not living up to the book of rules, just at that moment does the officer assume the responsibility. It is becoming more evident each day that road men are being relieved of responsibility and the responsibility transferred to some one else. As an illustration, take the case of a road which requires the train dispatcher to protect the rear of trains, thereby relieving the road men from performing their duty as required by the book of rules. Just so soon as every man on a railroad is required to live up to the instructions concerning the proper protection of trains in *any territory*, (and not "leave it to George"), just then will travel be safer, and property loss less.

J. L. COSS.

Why Cut off the Locomotive?

TOPEKA, Kansas.

TO THE EDITOR:

At this time when railroads are constantly looking for new possibilities for savings in operating costs it is surprising that so many of them still cling to the rule requiring the engine to be cut off while taking fuel or water with trains of over 20 or 30 cars.

This rule, like the one requiring trainmen to "decorate" while passing through each station, has been more honored in the breach than the observance for the last few years and in view of the possibilities for reducing train delays with the attendant saving in wages and fuel, it would seem that it should be dropped from the rule books, as indeed it has been by some railroads.

On the division upon which I am located approximately 150 water and fuel stops are made every day by freight trains. Assuming that in one-third of these cases the locomotive would be cut off anyway by reason of other work, this leaves an average of one hundred stops per day, consuming from six to ten or more minutes each, which could be shortened by at least three to five minutes by leaving the engine attached to the train.

On the basis of three minutes saving per stop, this would mean a reduction of three hundred minutes or five train hours per day on one division. The Signal Section of the American Railway Association has fixed the average cost of freight train delay at $21.07 per hour. This would mean a saving of $105.35 daily or $38,452.75 annually on the division mentioned, and in addition a still further saving would be made in the fuel which is consumed in pumping up train line pressure at four different stops on the average freight district, which would amount to several hundred pounds of coal daily for each train.

The argument is advanced that the rule in question is necessary in order to prevent damage to cars due to rough stops. I believe a little investigation will develop the fact that far more drawbars are loosened up or pulled out in attempting to start the long trains of today with the brakes still sticking in several different places than is ever done in making a spot at a crane or chute. A competent engineer should be able to make such a spot with the modern air brake equipment of today without rough handling, leaving his train line well charged so that when he is ready to go he has an easy starting train instead of one that he has to take the slack on several times; and then perhaps drag for miles with some of the brakes sticking.

KEPLER JOHNSON,
Train Master, Chicago, Rock Island & Pacific.

Awarding "Dirty Medals" on the Railroads

NEW YORK.

TO THE EDITOR:

The idea behind the method used in the shops of the Pullman Car & Manufacturing Company as an incentive to cleanliness, as described in your issue of November 15, seems to me worthy of widespread emulation.

The traveler occasionally sees on some railroads a sign—"Banner Section"—advertising to railroad employees and the public in general that those in charge of that particular piece of track have shown praiseworthy zeal and efficiency in accomplishing the task assigned to them. This practice is all right as far as it goes, but, from its very nature, it can appeal only to those who are already energetic and ambitious. Reward and punishment always go, or should go, together. A system which provides nothing but rewards or nothing but punishment cannot be as successful in achieving its object as one which utilizes both of these incentives, having due regard to justice in meting them out.

The Pullman Car Company, after awarding the "dirty medal" a few times, found slight use for it thereafter. Would not the railroads which now put up signs saying, "This is the best section on the division," secure more uniform efficiency by occasionally posting also a "This is the division's worst piece of track" sign? Similarly, other signs for the neatest and most slovenly kept stations, yards and enginehouses would be appropriate.

But the one place where stimulation to neatness is most sorely needed today—and where the railroads could award "dirty medals" right and left without injustice—is to the coach and engine cleaning forces. Locomotives and cars have been painted with colors (if they may be dignified by being called colors) which do not "show dirt." The result is that there is little incentive to keep them clean. Wholesale awards of "dirty medals" might stir some action, but what is really needed is the adoption of colors which are attractive and which *will* show dirt. Slovenliness is contagious. The housewife who does not keep her house clean is generally inefficient in other matters as well. The railroads, with one or two brilliant exceptions, are, insofar as their equipment which the public most often sees—passenger cars and locomotives—is concerned, about the dirtiest housekeepers of all American industry.

F. X. R.

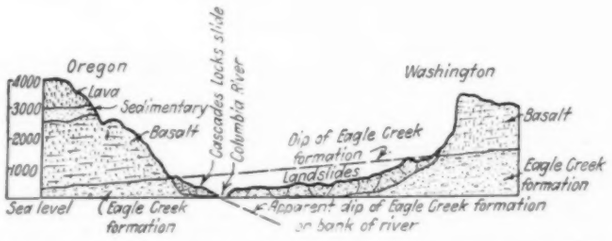
General View of Cascade Locks Slide and Columbia River from a Point near Tunnel 5

Drainage Tunnels Overcome Great Landslides

O. W. R. & N. Solves Formidable Problem of Moving Mountain Side on the Columbia River Line

THE Cascade Locks landslide—the "Sliding Mountain" of the early railroaders in the Northwest, has yielded to engineering analysis, and to a course of treatment, extending over a period of about six years. The results justify the belief that the work has been effective.

This landslide is located about 42 miles east of Portland, Oregon, near the town of Cascade Locks. It lies across the natural railroad route along the Columbia river



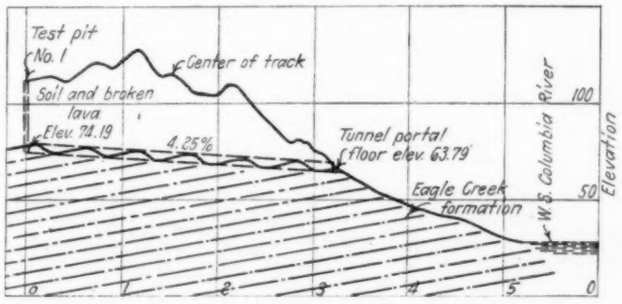
Section Across the Columbia River Gorge Opposite the Slide at Cascade Locks

and at the very beginning of railroad development in Oregon it presented itself as a problem to be reckoned with.

In 1873 the Oregon Steam Navigation Company undertook the construction of a portage railway around the Cascades of the Columbia and carried on the work intermittently through four lean years following the panic of 1873. In 1877 the president of the company was directed by the board of directors to suspend construction, because "the disturbed condition of the ground for two miles or more over which said road must be built caused by unusual slides from the mountains is of so serious a character as to create doubts as to the propriety of grading until the ground shall show evidence of being undisturbed."

Early Reports Foretold Difficulties

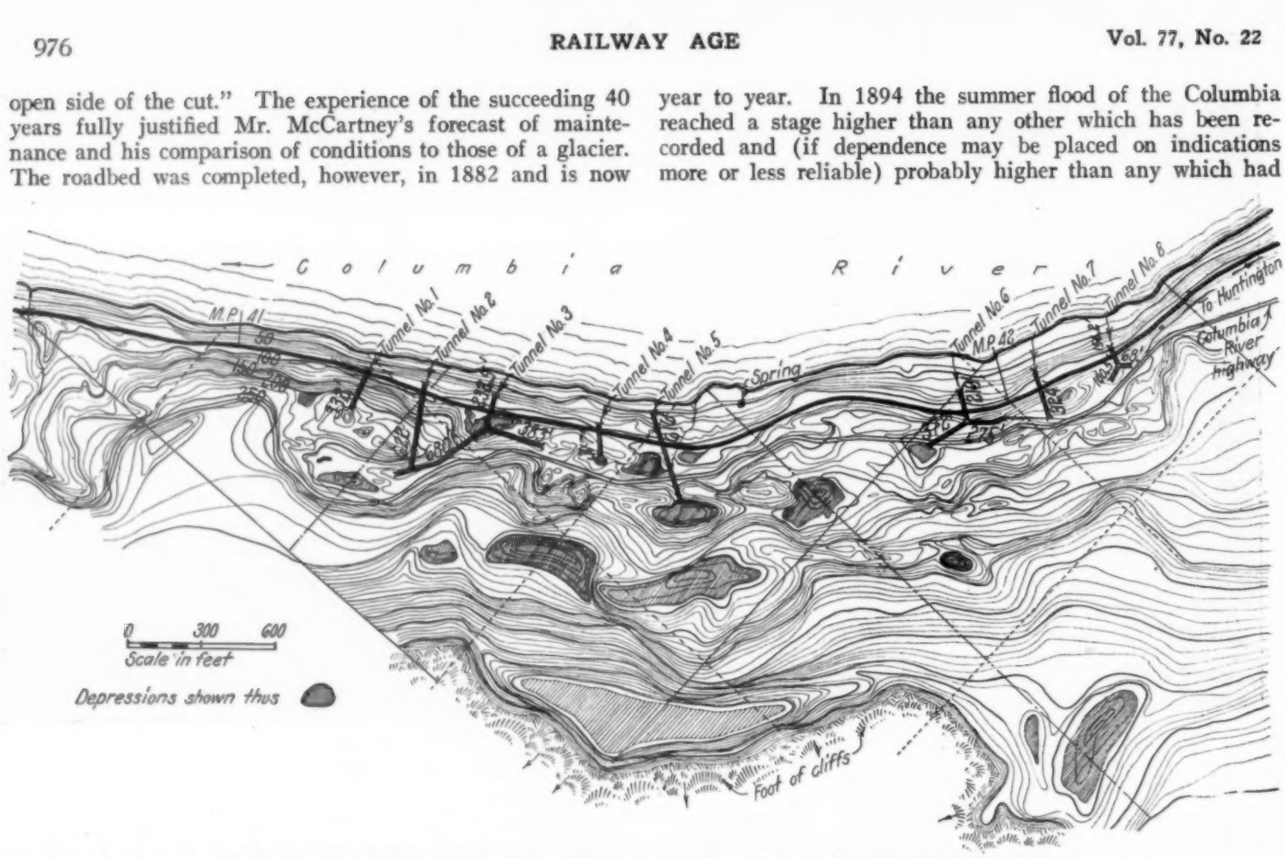
In the following year the uncompleted line passed from the ownership of the Oregon Steam Navigation Company to be incorporated into a transcontinental project. When work was resumed H. M. McCartney, engineer in charge of construction, reported: "For two miles along the side hill the whole country seems to be moving steadily toward the river like a glacier. It is all broken



Profile of Tunnel 7 West of Cascade Locks

and full of fissures and unstable looking to the last degree. If we make deep thoroughcuts transversely through it the effect will be to make the loose ground work from both sides back into the cut and all slides and lifts of the bottom will have to be dug out and loaded on cars to be removed. If we make a side cut there will be only one slope to look after and all material which comes in can simply be shoveled over the

open side of the cut." The experience of the succeeding 40 years fully justified Mr. McCartney's forecast of maintenance and his comparison of conditions to those of a glacier. The roadbed was completed, however, in 1882 and is now

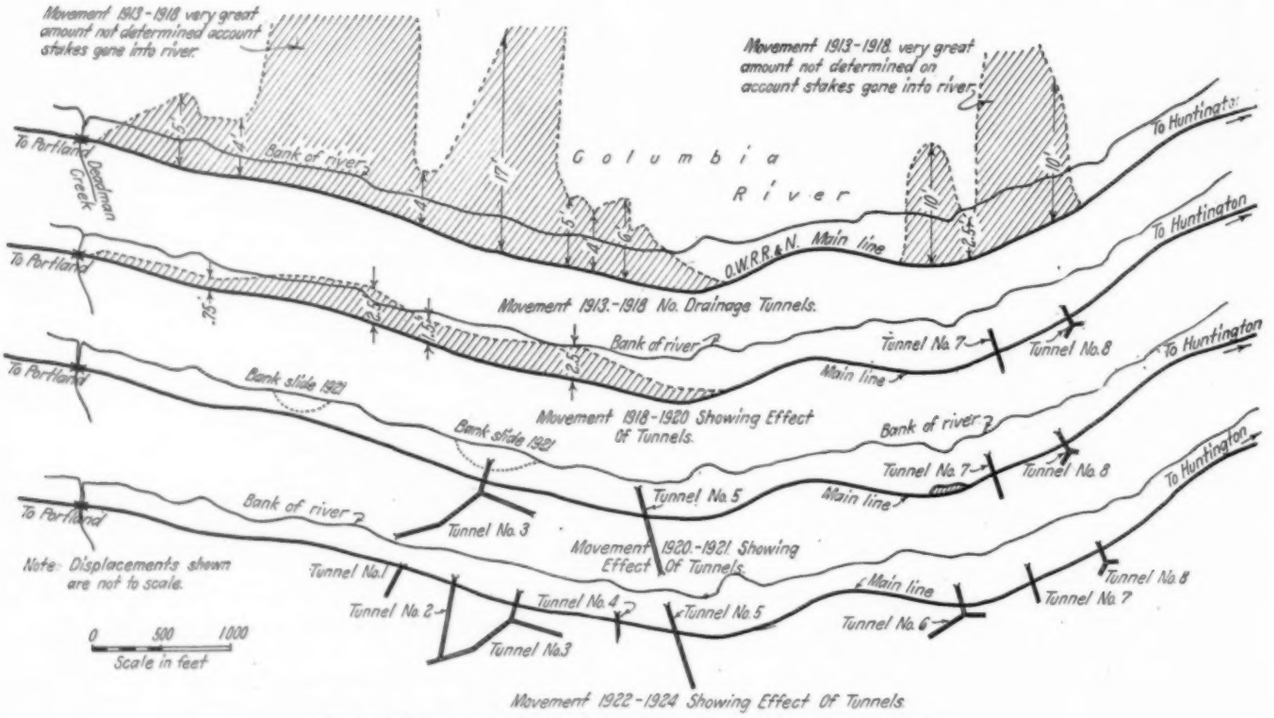


Contour Map of the Slide Area, Showing the Location of the Drainage Tunnels

a part of the main line of the Oregon-Washington Railroad & Navigation Company, the unit of the Union Pacific System serving the Pacific Northwest.

The operation of the railroad over this stretch was never free from difficulty. The expenditures for raising the tracks where they had subsided and for relining them as they were displaced laterally, were very heavy from year to year. In 1894 the summer flood of the Columbia reached a stage higher than any other which has been recorded and (if dependence may be placed on indications more or less reliable) probably higher than any which had occurred in centuries previous. Along the slide where the river's channel is restricted and its current rapid, the railroad was destroyed.

Immediately after the flood the line was reconstructed but at a higher elevation, resulting in increasing the gradient from 0.5 to 1 per cent. While the steeper gradient controlled tonnage in an engine district of 84


Movement 1913-1918 very great amount not determined account stakes gone into river
To Portland
Deadman Creek
Bank of river
Columbia River
Movement 1913-1918. very great amount not determined on account stakes gone into river
To Huntington
O.W.R.R.&N. Main line
Movement 1913-1918 No. Drainage Tunnels.
Tunnel No. 7
Tunnel No. 8
Bank slide 1921
Movement 1918-1920 Showing Effect Of Tunnels.
Main line
Tunnel No. 5
Tunnel No. 3
Movement 1920-1921 Showing Effect Of Tunnels.
Note: Displacements shown are not to scale.
Tunnel No. 1
Tunnel No. 2
Tunnel No. 4
Tunnel No. 6
0 500 1000
Scale in feet
Movement 1922-1924 Showing Effect Of Tunnels

Graphical Record of the Slide Movement from 1913 to 1924

miles, it was nevertheless demanded by physical conditions and was not discordant with the then existing or anticipated volume of traffic.

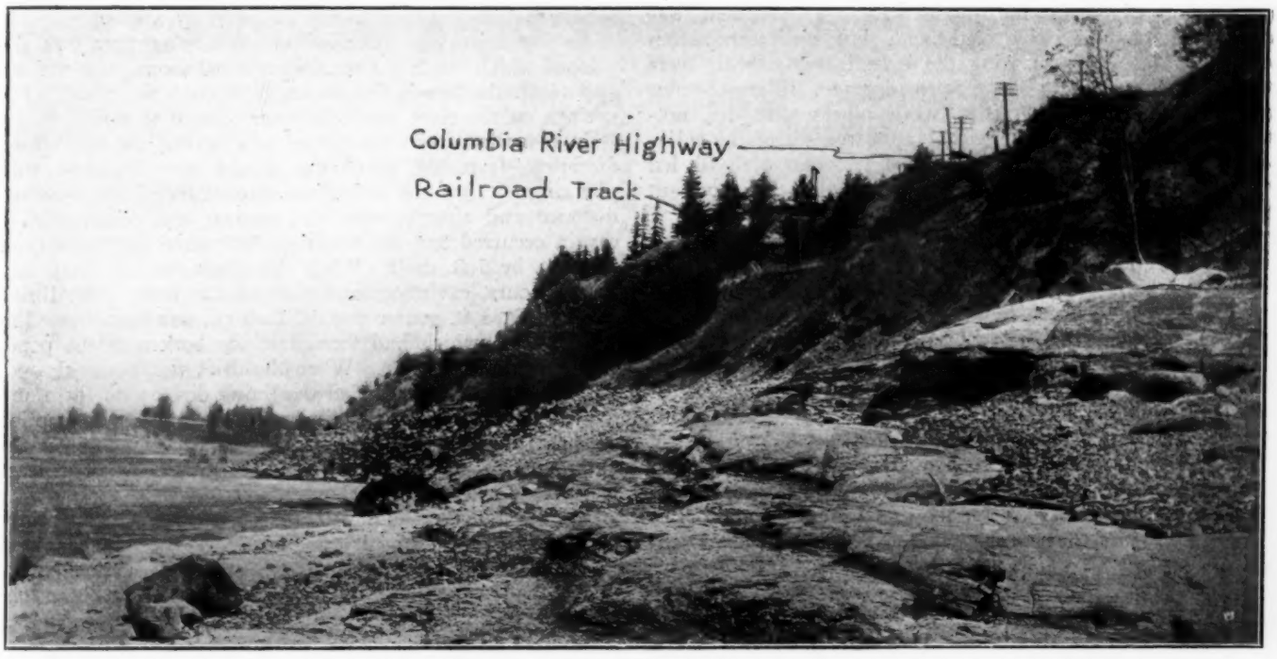
Projects looking toward the reduction of this grade were suggested later, from time to time. These would have been justified under normal conditions of maintenance, but did not meet the approval of sound judgment, which preferred a section of road that could be operated with extreme care although at rather heavy expense, to the hazard of having none at all as the probable result of changing the contour and affecting the equilibrium of the ground. Moreover, the movement had persisted through more than a generation, and seemed more easily to be endured than corrected.

Both Sides of Gorge Show Evidences of Movement

Investigations undertaken in 1917 with the hope of formulating plans for diminishing the movement were begun by careful examinations of the surrounding territory. The landslide lies approximately under the axis of the bombardment of falling boulders and fragments is almost continuous for periods of days or weeks.

The debris from the cliffs has crowded the Columbia river to the southerly side of the valley, and old slides from both sides of the stream have narrowed its channel and increased its slope. The Cascade rapids are probably the result of a slide from the south side of the gorge in relatively recent times.

On the south bank of the river the conditions which created the problem, while similar to those on the north side, cover a smaller area and seemed less acute. The contours were so irregular and the growth of timber and underbrush so heavy that a reasonably accurate idea of the terrain could not be obtained until a carefully prepared contour map was made. Perhaps the most striking topographical feature is the depressions without surface drainage. The largest of these has an area of about 20 acres and a maximum depth of 60 ft. The walls of some of the smaller depressions not yet broken down and the older trees in them,



Eagle Creek Layers Near Tunnel 5

Cascade mountains and on the south side of the gorge which the Columbia river has cut through that range. Here the basalt walls of the gorge rest on softer conglomerates of considerable thickness which by their disintegration have caused the cliffs on either side of the river to recede until they are separated by a distance of three or four miles. The entire valley floor is formed of stream deposits intermixed with debris from the cliffs and presents abundant evidence of instability, even to the superficial observer. Depressions and broken ridges complicate the contours; wide areas are covered with intermixed masses of conglomerate and lava among which streams lose themselves and reappear. On the steeper slopes fissures and the scars of recent slides are plainly visible.

The entire width of the valley floor from cliff to cliff is covered by a heavy growth of Douglas Fir and if there were no other indications of movement, many large trees with sharply curved trunks and others leaning noticeably from the vertical would call attention to the instability of the ground.

Apparently the north bank of the stream has come to rest, but signs of activity are especially impressive between it and the northerly wall of the gorge. From portions of this wall a standing dead among the thriving growth of saplings, were, with other evidence, a basis for the opinion that at least some of these depressions were of recent occurrence and probably the result of erosion beneath the surface and above the bed rock. The correctness of this conclusion was confirmed by later observations of actual subsidence.

Many Springs Were Evident Along Slide

The effects of the slide had been experienced for a distance of about 1½ miles along the railroad. The slopes above this section of line, which presented ample evidence of instability, reach a height of 500 ft. in the distance of about 2,500 ft. and rest against basalt cliffs which rise abruptly to an elevation of 4,000 ft.

The unstable ground is composed of a porous debris of earth, boulders and lava fragments. It is supported on soft stratified rocks, the Eagle Creek tuff conglomerates, which are visible below the high water stage of the river. These are intercalated with soft shales and clayey materials, are impervious to water and are very slippery when wet. Springs flowed over the surface of this rock at such close intervals that, in periods of very heavy rainfall,

their discharge formed an almost continuous film of water for nearly two miles along the margin of the stream. The discharge seemed usually to reach its maximum in March, when the saturation of the slopes was at the maximum. The annual precipitation at track level is 78 in., most of it falling as rain. At the higher levels the precipitation is greater and snow is more common.

While movement of the roadbed had been experienced at all seasons of the year, the most troublesome period was at the close of the winter months. To obtain an idea of the rate of movement the stakes of a survey for a proposed grade revision made in 1913 were retraced and most of them in the distance of 1½ miles were found to have been shifted laterally. The maximum measurable movement in a period of four years was found to be 17 ft., but in three sections aggregating 1,900 ft. in length no trace of stakes could be found. Some of them had been shifted 30 to 40 ft. when the bank broke off and carried them into the stream. The movement of these stakes will give an idea of the extraordinary maintenance required in preserving alignment and grade. Lateral movement was always accompanied by settlement, but settlement often occurred alone. In pursuing the investigation, shafts were sunk to bed rock south of the railroad grade. In some, water was encountered in quantities, while others were dry, notwithstanding large seepages that appeared along the adjacent river bank. The data obtained from these shafts led to an analysis of the situation that is probably the important factor in the successful solution of the problem.

The Eagle Creek layers, were exposed, seem to slope in the direction of the slide, downward toward the river. However, this rock is 1,000 to 2,000 ft. thick in the north wall of the gorge, while its greatest depth in the south wall does not exceed a few hundred feet, indicating a slope actually opposed to the direction of the slide. The apparent slope on the river bank has resulted from the bevelling of the layers by the erosion of the stream. Above the erosive action of the river, where the rock is protected by overburden, the edges of the strata present themselves in a series of ridges, the intervals between which, filled with porous material, acted as channels and reservoirs for the underground waters. The shafts sunk into the ridges were dry, while water was encountered in those which happened to strike the depressions between ridges.

Drainage Measures Were Undertaken

Nothwithstanding the great area of the slide and the impression created by years of almost continuous trouble, the study indicated that treatment by drainage might be reasonably practicable. The alternating ridges and channels could be expected to supplement the drainage tunnels by increasing their effect laterally. Concentration of water in tunnels would reduce erosion beneath the ground surface and prevent sudden settlements of the track such as had been experienced, and stabilizing a sufficient volume of material at the toe of the slide would have the effect of a retaining wall pervious to water.

In July, 1918, a drift 4 ft. wide by 6 ft. high was undertaken near the easterly end of the slide where conditions were most acute and at a point from which a considerable flow was issuing. The drift was projected with the idea of intersecting the bottoms of the water-bearing channels. The channels were cut at intervals of 25 to 30 ft. and flows of water of 15 to 30 second feet broke forth, continuing in diminishing volume for two or three days in some cases. When this tunnel had been extended about 130 ft., a body of quicksand was tapped which poured out with a depth of 3 ft. at such speed that the miners were hard pressed in their retreat. Cavities were encountered which were undoubtedly the result of erosion and which ultimately must have resulted in surface settlement.

The effect of the work was so immediately beneficial that a second tunnel was commenced at a spring about 550 ft. west of the first tunnel. By the close of 1918, both drifts having been extended to lengths of 324 ft., work was suspended.

In May, 1920, when the work had received the test of two rainy seasons, surveys disclosed that the ground adjacent to the track along the westerly portion of the slide had been displaced about two feet, while no evidence of movement could be detected in the easterly portion which had previously been the more troublesome. In July of that year work was commenced on two additional tunnels, one of which was directed toward a pond lying approximately 500 ft. from the railroad, and which presented unusual problems. This pond discharged about 20 second feet through a flume, and the use of fluorescein dye proved that springs along the river bank found their source in the pond for additional flows aggregating about 25 second feet. It was planned to extend the tunnel to a point about 50 ft. vertically below the bottom of the pond, to upraise as judgment should dictate and then to tap the pond by a blast.

As the drift was extended an increasing flow was developed which reached a maximum of 60 second feet without apparent reduction in the discharge through the flume. The springs on the river bank, however, ceased to flow.

In order to protect the tunnel sets against the anticipated discharge from the pond the tunnel was sheathed with planking. After the drift had been carried the required distance and shortly after the upraise was commenced, a cavein occurred and the resulting flow taxed the capacity of the 4 ft. by 6 ft. drift. When this discharge had continued for 48 hours, caving ground shut off the flow. The lining for a shaft, 3 ft. square and 50 ft. high, was then erected in a depression which had formed in the bottom of the pond, and was guyed to trees. When the drift was again cleared, the waters effectively carried the lining down with them and landed it upon the tunnel timbers. The pond was emptied in about 24 hours. A heavy flow still continues to enter the tunnel, which has lowered the level of ground water at least 50 ft. over a large but unknown area.

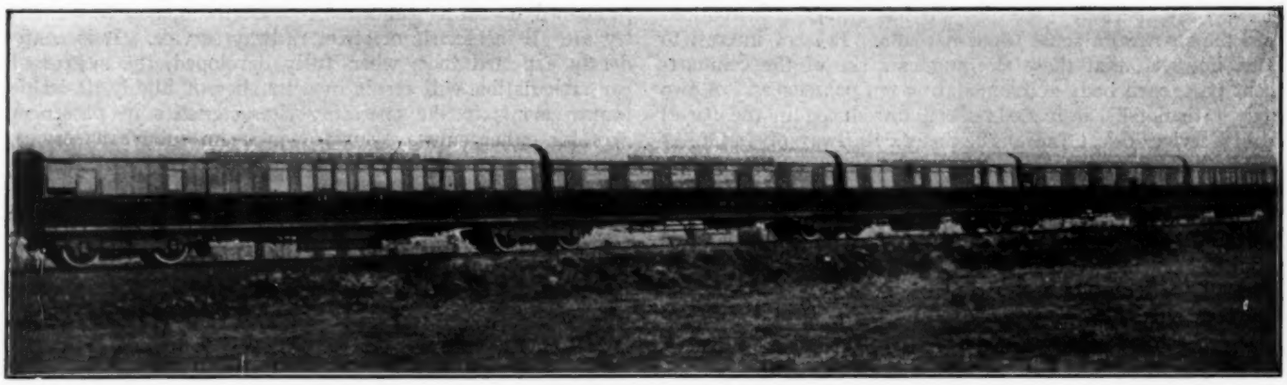
In all, eight tunnels have been constructed with an aggregate length, including laterals, of 4674 ft. It has been found desirable to commence the heading at a visible flow and to follow it until satisfactory results have been obtained. Where no decided flow is in evidence, extending the tunnel toward a surface depression which indicated the probable location of underground flows, has been successful. The tunnels are lined with Port Orford Cedar (Lawson Cypress), a wood which combines strength with marked resistance to rot.

The results of the work are quite satisfactory. In January, 1923, during protracted heavy rains, the discharge from the tunnels totaled 350 second feet. Caution signals were necessary both east and west of the slide, but no slow orders were required along the slide.

The movement of the track has gradually decreased as the work progressed and no displacement has occurred since the winter of 1920-21. Slow orders which were usually in effect for 100 days per year prior to 1918 are now seldom necessary.

Whether the tunnels have been carried sufficiently far to drain a mass large enough to retain the ground beyond them effectively and to insure permanent results may still be speculative. But observation indicates that lateral movement has been consequent on settlement due to underground erosion, and in no case where displacement has ceased during the six years of work has it recurred.

The entire project has cost about $120,000. The problem was analyzed by S. Murray, assistant chief engineer of the O.-W. R. R. & N., and the work was carried out under his direction by A. C. O'Neel, assistant engineer.



A Five-Bodied Articulated Through-Line Dining Car and Day Coach on the London & Eastern

The Articulation of Passenger Cars*

Reduction in Weight, Maintenance, Operating and First Costs—Riding Qualities Improved

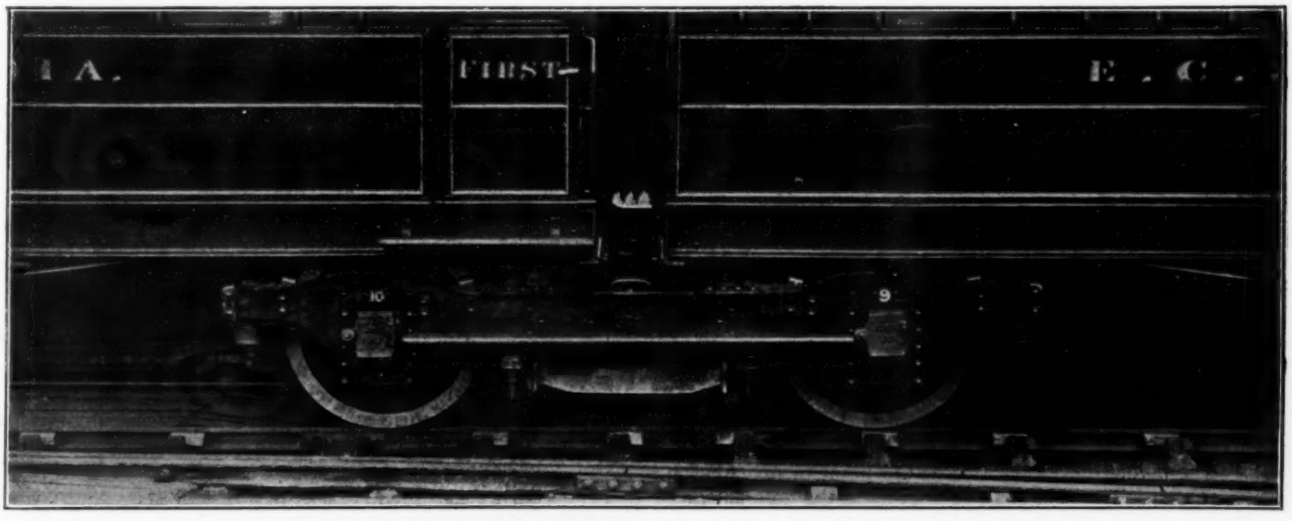
By W. G. Gove
Superintendent of Equipment, Brooklyn-Manhattan Transit Corporation, New York

THE DEMAND FOR PASSENGER transportation both within and between large cities has for a number of years been constantly increasing both in this country and abroad. To meet this demand with adequate facilities has been a difficult problem involving both mechanical and financial elements.

In England the cost of operating the steam roads between the larger cities, has increased to such an extent that every possible economy based on practical experience is receiving the most thorough consideration. Any notable reduction in weight or of first cost of passenger cars is regarded as of the utmost importance. A distinct advance toward meeting this problem has been made both at home and abroad by the introduction of the articulated car.

In its simplest form the articulated car can be briefly defined as two car bodies permanently coupled together, each with its outer end supported on a truck in the usual manner, but having the two body ends adjacent each other, supported on one truck common to both bodies. Thus a two body articulated car is supported on three trucks, a three body articulated car on four trucks, a four body car on five trucks and so on.

The introduction of the principle of articulating steam railway cars is said to have originated in England. The first trains of this type in England were placed in service on the Great Northern Railway. Their operation has been so successful that there are now more than 200 sets in service. These cars range in length from two body surburban steam cars to a five body through line car which includes a dining section permanently incorporated in the middle of the unit.



Pivot Truck of Articulated Car, London & North Eastern

*Abstract of a paper presented at the meeting of the New York Railroad Club, November 21, 1924.

A two body articulated sleeping car has also been introduced into the service on some English roads. It is of interest to note, however, that these sleeping cars are of the compartment type, each body accommodating ten passengers. A two body articulated car has also been introduced in the Royal Mail Service, Great Indian Peninsula Railway of India.

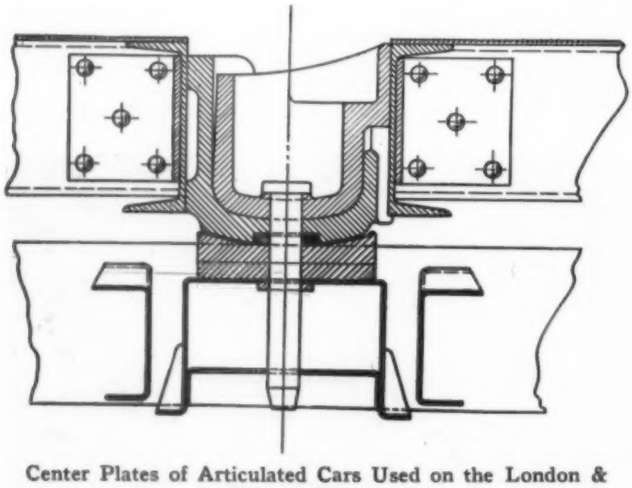
The objective on the English roads was primarily reduction in weight and first cost. The savings accomplished by this method of articulation obviously depends upon the number of bodies composing the car. The principle items omitted from a two body car are: one truck, two drawbars and couplers, two draft gears, two sets of buffers, two end sill constructions, various parts of brake rigging and sundry incidental items of equipment.

On the English roads the saving accomplished by articulating five bodies on six trucks is said to have amounted to a 20 per cent in weight, and an eight per cent saving in first cost.

The articulated cars meet with public approval in England because passing between the bodies while in motion is greatly simplified due to the body ends being supported on the same truck center plate. This method of supporting the adjacent ends of two bodies on one truck obviously eliminates all relative vertical or horizontal motion between adjacent body ends and consequently also eliminates the vibration, clatter and noises which are constantly being set up between the ends of ordinary coupled vehicles through the buffer face plates and diaphragms grinding backward and forward across each other.

For the purpose of brevity and accuracy in this paper I will hereinafter use the following names:

Articulated Car—This is a multiple bodied vehicle having the adjacent ends of the bodies supported by a single truck. In this connection an articulated car having two bodies is a



Center Plates of Articulated Cars Used on the London & North Eastern

duplex car, one having three bodies is a triplex car, one having four bodies is a quad car.

The Pilot Truck—This is located at the outer end of the car. The pivot truck is located at the point of articulation.

The Drum—The enclosed passageway at the point of articulation, when cylindrical in form, is designated as the drum.

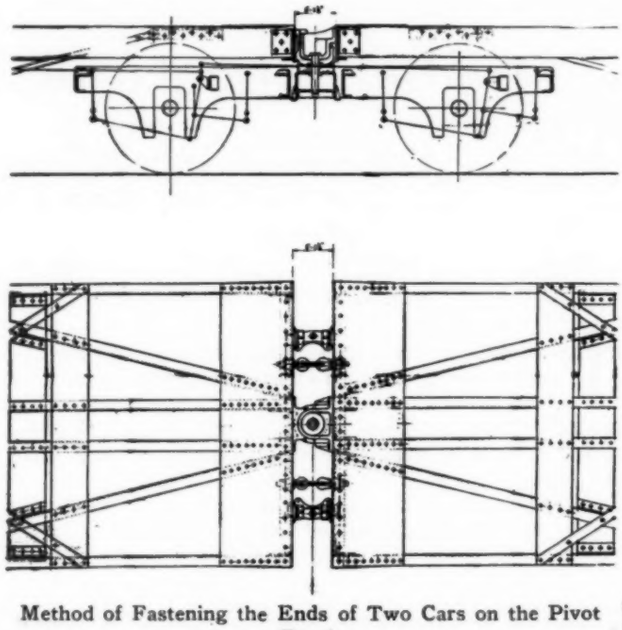
The Bellows—The passageway when formed of an expanding canvas diaphragm is called the bellows.

Improvements Obtained by Articulation

At the present time the design and operation of articulated cars in the United States is in the early state of development. Considerable progress has already been made but the practicability of some features remain to be demonstrated under prolonged operating conditions. Installations in this country are all in electric or street railway service. It is confidently expected that, when fully developed, the system of car articulation will result in a number of highly desirable improvements in the operating characteristics of passenger cars for either subway, surface or steam suburban service. The hoped for improvements may be briefly outlined as follows:

It is claimed for articulated cars in service both in Europe and this country that a notable improvement is observed in their riding qualities, the lateral motion or side rolling of the body having practically disappeared. This is accounted for by the fact that the articulated car body is supported at its extreme end where it rests on the bolster of the pivot truck and consequently has no overhang.

As the articulated ends of the bodies are in close contact,



Method of Fastening the Ends of Two Cars on the Pivot Truck

there can be no slack between the bodies and consequently the cars start and stop smoothly. The passageway between the articulated bodies provides at all times for free and safe movement of passengers throughout the car. This passageway is also weather-proof and draft-proof.

The articulated units should cost less per passenger than the equivalent capacity of single cars. When forming articulated cars by rebuilding bodies of existing equipment, the salvaged materials consisting of trucks and other parts, amounts to a very considerable item either when returned to stock or applied to the equipment of new cars.

The greatest saving in weight will, of course, be realized when cars and trucks are specially designed for articulation and when every feature is given careful consideration from the point of view of economy in weight combined with reliability of service.

There will be a direct saving in cost of power required to haul the lighter cars with fewer trucks. There will also be a direct saving of labor in the inspection and maintenance of the consolidated units. These savings will vary according to the extent of the consolidation so no specific value can be given at this time to these factors.

How the Cars Are Constructed

The items of car and truck construction involved in the system of articulation can only be briefly referred to in this paper. The function of the members is the same in most

of the cars, though the details of design may vary in accordance with specific requirements of clearance, door arrangement, etc.

The first articulated cars in England consisted of two bodies having a truck located as usual near each outer end and a single truck at their inner ends. The outer trucks were of the usual type but the single truck was fitted with two bolsters, the theory being that the two bodies in passing over uneven track and around curves would have a tendency to rock independent of each other and would therefore have to be supported on separate bolsters fitted with separate side bearings. Actual experience with the cars in question disclosed the fact that, under the conditions prevailing on the road-bed on which the cars operated, the rolling movement was actually so slight that a truck with a single bolster could be used.

Various designs of center plate support for the articulated ends of the bodies have been developed. The design used on the English cars is such that the center plate load of one body is carried on the upper surface of the center plate of the adjoining body, the lower surface of which engages the center plate of the truck. The early designs in this country followed this arrangement. More recent designs arrange for twin car body center plates, each with a separate bearing on a common truck center plate casting. This latter arrangement provides a better opportunity for lubrication and for disengaging the articulated bodies from the pivot truck when in the shop.

The design of side bearings for the pivot truck will require careful attention to provide for the proper support of the pivoted ends of the bodies and at the same time permit of the necessary freedom of each body to conform to the canting caused by the elevation of the outer rail on curves, change of grade and all the various combinations of these factors. The method of support must be such that there will be no tendency to produce torsion in the bolster of the pivot truck.

The articulated cars in England operate on comparatively long radius curves and consequently the flexible vestibule connections between those articulated bodies consist of the usual accordion-like diaphragms, the edges of which are in some cases permanently attached to their respective body, in other cases the diaphragms are fitted with face plates.

In the United States the development of the articulated unit was first applied to cars operating on short radius curves. This has lead to the designing of various forms of passageways having semi-cylindrical side walls mounted on top of the pivot truck and at all times maintaining free communication between the bodies even when operating on curves of the shortest radius. These cylinders are of steel, usually with the walls lined with a temperature insulating material. The space between the cylinders and the car body is fitted with rollers or other devices to provide weather-tight joints. The top head of the cylinder is formed to shed water and the inside of the bottom head forms the floor of the passageway.

THERE has been considerable criticism recently in the London papers of the service a certain English railway has been giving to its patrons and, with the memory of the brilliant success of one American railway officer who took charge of a British road some years ago, several persons have written to the daily papers, so the *Railway Age* is informed by a correspondent, suggesting that a competent American railroad man be asked to take charge of this road. One of these letters, published recently, follows:

"There was an outcry because a few years ago one of our railways placed an American at its head. That railway (the Great Eastern) today gives the public an excellent service.

"Could not those responsible for the ——— Railway make a similar experiment? If they reply, 'Oh, but there are Englishmen equally efficient,'—why are they not in office? At present trains are frequently half an hour late on an hour's journey. . . . ."

Freight Car Loading

WASHINGTON, D. C.

FREIGHT CAR LOADING continues to exceed all records for this time of the year. For the week ended November 15 the total was 1,015,704 cars, an increase of 23,654 cars as compared with the corresponding week of last year and an increase of 58,140 cars as compared with 1922. This also was an increase of 23,200 cars as compared with the previous week, which included Election Day. Increases as compared with the week before were shown in all classes of commodities except ore and miscellaneous. Coke, forest products and ore showed decreases as compared with last year. All districts except the Northwestern showed increases as compared with last year. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

REVENUE FREIGHT CAR LOADING

Week Ended November 15, 1924

Districts	1924	1923	1922
Eastern	236,598	234,873	247,062
Allegheny	197,599	196,050	203,929
Pocahontas	52,039	39,031	30,509
Southern	156,853	142,721	136,102
Northwestern	133,270	148,197	130,333
Central Western	161,082	158,723	151,296
Southwestern	78,263	72,455	58,333
Total Western	372,615	379,375	339,962
Commodities			
Grain and Grain Products	55,313	48,015	55,061
Livestock	45,385	40,681	40,715
Coal	188,229	170,998	200,791
Coke	10,039	10,751	12,474
Forest Products	69,630	72,749	60,898
Ore	20,836	45,049	33,102
Mdse., l. c. l.	253,768	247,816	228,010
Miscellaneous	372,504	355,991	326,513
Total	1,015,704	992,050	957,564
November 8	994,504	1,036,221	944,186
November 1	1,073,430	1,035,849	979,851
October 25	1,112,345	1,073,841	999,718
October 18	1,102,336	1,073,095	989,889
Cumulative Total, January 1 to date	43,166,801	44,680,009	38,101,745

Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended November 15 showed the effect of the Thanksgiving holiday (November 10 in Canada) being 63,654 cars, as compared with 69,414 cars in the previous week. Compared with the same week last year, in which there was also a holiday, grain showed a decline of 4,296 cars, all of it being in the Western division. Live stock and coal showed substantial increases but pulpwood was down.

TOTAL FOR CANADA

Commodity	For the week ended Nov. 15, 1924	Nov. 8, 1924	Nov. 17, 1923
Grain and grain products	15,098	17,367	19,394
Live stock	3,617	3,769	2,892
Coal	8,405	8,690	7,522
Coke	274	259	164
Lumber	3,546	3,392	3,686
Pulpwood	1,092	1,229	1,387
Pulp and paper	1,956	1,927	2,060
Other forest products	2,103	2,317	2,161
Ore	1,501	1,141	1,250
Merchandise L. C. L.	13,736	15,437	13,288
Miscellaneous	12,326	13,886	11,800
Total cars loaded	63,654	69,414	65,604
Total cars received from connections	30,004	30,247	34,156
Cumulative totals to date—1924			2,571,888
1923			2,501,087

RECEIPTS of California grapes at New York City freight stations during the past season, about three months, aggregate 13,002 cars, or 3,250 more than in 1923. "Juice grapes" are so designated on way bills. These were moved in such large volume that some of them had to be diverted at Chicago, from the Erie to the Baltimore & Ohio or the Pennsylvania; and at the beginning of October the movement had to be checked by an embargo. Throughout the month of October the average number of cars of grapes waiting to be unloaded at New York was about 400.

Photo by Lewis W. Hine

What Railroad Managements Should Do to Secure Co-operation from Their Employees

By Dr. Henry Clayton Metcalf
Director, Bureau of Personnel Administration, New York

[*Doctor Metcalf is already known to the readers of the* RAILWAY AGE *as one of the judges in its competition on co-operation in the interests of railway efficiency. A brief outline of his career was printed in the* RAILWAY AGE *of June 21, 1924. He specialized in his university training on economics and labor problems, and was then called to the chair of economics at Tufts College. He has, however, at all times kept closely in touch with industry, spending much of his time during his 15 years at Tufts on management and personnel questions in industrial plants. He was called by the federal government during the war to help in directing the war emergency training courses for employment managers. For several years he has been director of the Bureau of Personnel Administration in New York. This organization has a strong Educational Division for training in the science and art of personnel administration. Its Labor Analysis Division makes scientific surveys of personnel activities in industrial and other organizations and assists in shaping constructive labor policies. Its Placement Division recommends qualified candidates for positions in personnel work, and its Bureau of Information acts as a clearing house for significant facts relating to the status and progress of industrial labor relations. Doctor Metcalf is thus especially well equipped to analyze and make constructive suggestions based on the papers which were presented in the* RAILWAY AGE *competition.—the* EDITOR].

RAILROAD administration would be vastly simplified if the attitude of employees were at all times and in all respects apparent. Merely to know if some new procedure is likely to meet with open defiance, sullen compliance, or active, whole-hearted, and intelligent support would smooth the way and lighten the burden of operating executives.

An illuminating insight into opinions which railway employees hold concerning current management policies and practices was afforded the writer when perusing the 372 essays submitted last spring in the *Railway Age* contest for "the best methods for bringing about co-operation between railways and their employees to promote efficiency." Contributions were received from nearly all ranks and branches of railroad service—corporation directors, division superintendents, engineers, station agents, clerks, shopmen, Y.M.C.A. secretaries, switchtenders, telegraph operators, and even the wives of some. While it is probable that contributions from persons in supervisory positions predominated, as a whole

these essays may be fairly regarded as presenting a cross section of the convictions of those railway employees who have been long enough in the service to have given serious thought to the problem of co-operation between management and men.

What these writers recommend is born of intimate contact with the conditions under which railroad work must be performed. Their proposals, with an occasional exception, are far from fantastic or utopian; yet through them one sees visions of a new era of railroad management. Many of the contestants will rise to positions of power in the transportation world, and it is significant that they now discern the need for broad gaged, liberally conceived policies affecting the human or personnel problem.

The accompanying table summarizes under 10 classifications, the 222 separate suggestions contained in these 372 essays. Needless to say, certain suggestions were repeated many times. The advocacy of employee stock ownership, for instance, is found in 70 of the papers. This is an example of one of the items entering into the first classification in our list. The scheme for classifying the contestants' ideas was not superimposed, but grew logically from them. Another analyst, to be sure, might have assembled them somewhat differently, yet we venture to say that this condensation into 10 major groups does them no serious violence.

What Railroad Men Want

What these railroad men want is a proprietorship interest in their roads, a reason to be proud that they are engaged in the railway business and that they are affiliated with their own particular roads. "Wages, hours and working conditions," important and fundamental though they are, are far from uppermost in the minds of these employees. Taking the four leading proposals of the thirty-three which we have condensed into the first recommendation in the table, we have the following:

Seventy-one writers advocate "publicity to employees regarding the road's financial condition, operating progress, and general policies";

Seventy advise the railroads to "encourage employee stock ownership by easy payment plans";

Fifty-eight ask that the roads "encourage employees to make suggestions", implying that a financial incentive should be provided;

Forty-three recommend "mass meetings of employees to be addressed by officials presenting information about the road's progress and problems".

The same eagerness to be "let in on" the interesting problems outside of routine duties is apparent as one reads down the list of suggestions classified under the first head. Note particularly these:

"Use employees' magazines to arouse interest and instill loyalty."

"Maintain libraries and reading rooms well supplied with railroad literature."

"Establish committees, or voluntary organizations among employees to promote efficiency."

"Educate employees regarding economics."

"Encourage employees to aid in solicitation of business."

"Invite men from the ranks to attend staff meetings."

One suspects that many of the suggestions under this and other classifications merely describe practices which obtain on the roads by which the proponents are employed. They are for that reason none the less significant, since they attest the favorable attitude of employees toward such practices.

Craving for status and recognition of their human personality and worth is another admirable and wholesome trait of these writers. This is apparent from a study of the detailed content of the second and third classifications. Opportunity for promotion predicated upon merit, fairly ascertained; fair and constructive administration of discipline; friendly, courteous, individualized treatment from superiors and officials—what are these but reasonable desires of workmen from whose ranks may well be chosen the future executives?

Proposals Regarding Joint Relations

A larger number of suggestions bear upon joint relations than upon any other subject. Forty-two of the 222 proposals advanced fall within this field. Of the 141 essays offering suggestions regarding joint relations, fifty-nine advocate the establishment of employee representation, nineteen of that number recommending specifically the Pennsylvania plan. It seems likely that among the contestants are many men who have served as employee representatives. Their partiality for an arrangement which has brought them individually into positions of prominence and some authority is perhaps no more than human. Yet many of those advocating employee representation are evidently minor executives whose

What Railway Employees Think Railroad Management Should Do

Number of essays (total number 372) proposing the recommendation indicated

1. Arouse intelligent *interest of employees in the road's success*. 201
2. Improve *opportunities for individual advancement* through fairer promotional and disciplinary policies, and facilities for education 164
3. Induce officials and all in positions of authority to display a more *friendly, courteous and appreciative attitude toward subordinates* of their own and other departments 155
4. Improve *joint relations for negotiating collective agreements* and for adjusting and avoiding grievances 141
5. Centralize and adopt *modern practice with reference to Personnel Administration* 118
6. Pay *good wages,* supplemented by suitable financial incentives for good workmanship..... 94
7. Continue and *extend welfare work, benefit features, and special privileges* 91
8. Improve *quality of foremanship* in all branches of service. 73
9. Improve *working conditions,* equipment, and living quarters, and promote safety..... 69
10. *Regularize employment*..... 43

testimony in its behalf appears as the sober judgment of men whose opinion should carry weight. In addition to the 59 open advocates of employee representation, 19 more express themselves as favorable to joint conferences between management and employee representatives to adjust grievances or administer benefit and welfare plans.

The unions have their friends among the writers, 18 of whom advise acceptance of unions as established facts and avoidance of measures likely to antagonize them. Eight more advise that joint relations be based on existing unions and their machinery. Seven writers allude favorably to the relations between the Baltimore & Ohio management and the shopcraft unions. One writer in his enthusiasm for unions advocates joint management of railroads with the unions, another that the railroads invite union representatives to serve on the general staff, and a third that the roads provide union officials with office quarters on railroad property. Yet only two persons express opposition to what they call "company unions".

Demand for Personnel Program

The necessity for a consistent personnel program, as a means wherewith to accomplish their major objectives, is appreciated by many. As many as 118 urge the adoption of modern practice with reference to a personnel department, seven others that a personnel officer with high rank, that of vice-president or assistant to the president, be appointed. A large number who fail to see quite so far perceive the importance of scientific selection of personnel. Forty-two lay stress on the selection of employees for subordinate positions, while for 34 others the paramount need concerns the appointment of first line supervisors and minor executives—the foreman and sub-department heads who have long been the target for adverse criticism.

Barely a fourth of the essays make any reference to wages, bonuses, or profit-sharing; and of the 34 which proffer the trite advice that "good" wages be paid, only one or two indicate any dissatisfaction with present wages. Much attention is given under this head to bonus plans, but little unanimity is evident. Fifteen advocate some financial regard for individual merit, based in some way upon a merit rating. There are many who favor individual production bonuses, and about an equal number opposed. Of the latter many see advantages in gang bonuses or those affecting large groups and dependent upon reduction in operating expenses. But by and large wages are not now, at least for these writers, the formidable bone of contention which officials of unions are wont to declare them.

On the whole the attitude of these railroaders is favorable to the benefit features, welfare work, and special privileges which have long characterized the labor policies of leading railway systems in this country. Forty-two of the essays make favorable allusion to pensions and 41 to group life insurance as rewards for faithful, continuous service. There is appreciation also of recreational facilities, encouragement for home purchase, thrift plans, pass privileges, and the work of the Railroad Y.M.C.A. There is also criticism, as might be expected, of some of these, with here and there a suggestion for their improvement.

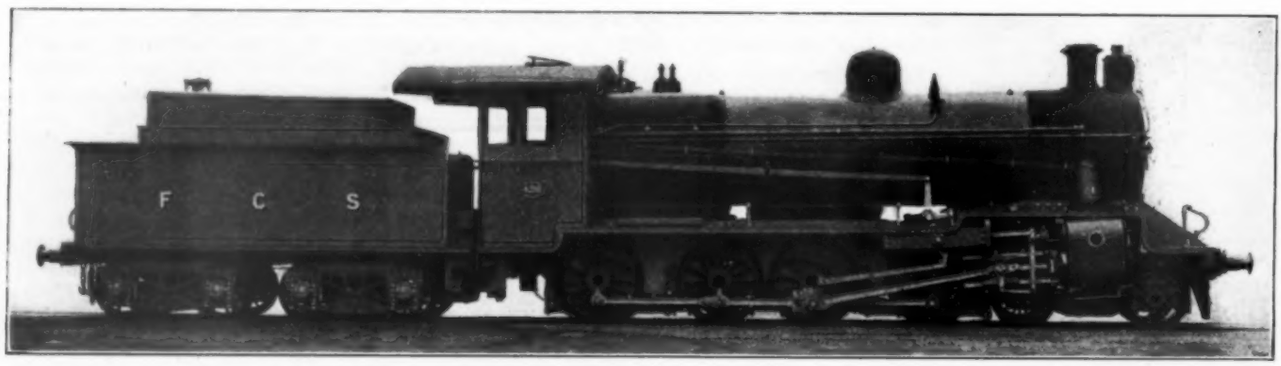
The opinion of some that more care should be exercised in the selection of foremen has already been mentioned. Closely allied is the conviction that a higher quality of supervision is generally needed. Foremen's training, with emphasis upon "handling men", is proposed by 23 essayists. Beyond this suggestion, sound though familiar, there is little concurrence.

The importance of good working conditions is mentioned by a large number, but few of the references are detailed or specific. Nineteen, however, emphasize the need for good tools and equipment, a fundamental of good management. Lay-over quarters for train crews, housing and camps for construction and repair gangs receive some criticism.

Regularization of Employment

Regularization of employment is a need affecting particularly those branches of the service concerned with maintenance of way, structures, and equipment, and possibly because of the limited incidence of unemployment among railroad workers it received less attention than might have been the case had the writers been employed in manufacturing industries. Only 43 of the 372 writers make any reference to the subject, and only a few of these dwell upon it. Its importance is nevertheless great, as is indicated by the fact that the railway executives by unanimous action are co-operating with the Interstate Commerce Commission to find some way of bringing about a greater degree of stabilization of employment on the railways.

That the time is ripe for thorough-going application of the best management talent available to the task of creating and maintaining right relations between railroad managements and their employees is amply apparent. The presidential election gives little ground for fear that American workmen espouse revolutionary radicalism. On the other hand they do want opportunity for more vital and conscious participation in the industries with which they are affiliated than is afforded by the dutiful performance of routine tasks in exchange for a stipulated wage. They are ready to assume a greater degree of responsibility for the business success of the enterprise which yields them support than is possible while they are kept in ignorance of all but the technical details of their individual jobs. This is the message of hope which these thoughtful essays bear to one who seeks their collective meaning.



Locomotive Built by Sir W. G. Armstrong-Whitworth & Co., Ltd., Newcastle-upon-Tyne, for the Buenos Aires Southern

National Industrial Traffic League at New York

Plans for Active Opposition to Disturbing Legislation on Transportation Subjects—I. C. C. Supported

THE DOINGS of the National Industrial Traffic League on the first day of its annual meeting in New York City, November 19, were reported in the *Railway Age* of November 22, page 945. The first business on the second day, Thursday, November 20, was the consideration of the report of the Freight Claims Committee, G. A. Blair, chairman. This committee made a brief report, having found very little business to do during the past year. The committee finds that there has evidently been a marked reduction of delays in settling claims.

The meeting then resumed consideration of the report on demurrage, which was left unfinished on the previous day. Certain parts of this report which dealt mainly with changes which are proposed in the demurrage code were referred back to be considered by a joint conference of this and the reconsignment committee. Rule 3, section B, paragraph 1, took this course. Proposed changes in a note to Rule 3, section B, paragraph 1, set forth in the report, had been withdrawn by the carriers and a proposed change in paragraph 2, as set forth on page 7 of the report was laid aside, the carriers having agreed not to press it. A new note to Rule 4, section A, defining the term "destination" was approved by the meeting, as was also a proposed new note to Rule 4, section B, to the effect that this section should not apply to cars stopped in transit. Approval was given also to changes clarifying Rule 8, section D, paragraph 3; the note to Rule 8, section E; and in Rule 9, section D.

That part of this report discussing the application of demurrage and storage charges on freight held in bond was referred back to the committee. The committee disapproved of a proposal of the carriers concerning Rule 9 of the average agreement and similar action was taken on Docket No. 13 on page 10 of the report. The carriers' interpretation of the rules regulating practice, where cars are loaded contrary to embargoes, was agreed to.

The last chapter in this report, in which the committee told of its dismissal of numerous informal requests to seek a general reduction in demurrage rates provoked considerable discussion, a number of members expressing approval of those requests and pointing out that under present conditions the railroads are finding difficulty in getting cars off their roads—that is, in keeping cars where they will earn something; and a reduction of the demurrage charge would not be unreasonable. A motion was made (by a member of the demurrage committee) to instruct the committee to negotiate with the carriers for a reduction; but after several leading members had pointed out the difficulties of this committee's task and the various economic conditions justifying rates higher than those in force before the war, the motion was voted down by a loud chorus of noes. To the argument that the absence of car shortages this year justifies relaxation of the demurrage rules, Chairman Butler replied that without doubt the existence of the present rates had been a material element in the production of this year's good car-performance record. A member who spoke in behalf of the Portland Cement Association emphasized the point that demurrage is a device not to gather in money but to keep cars moving. The cement makers use thousands of cars yearly, but they pay very little demurrage. Following this discussion the report of the committee was approved as a whole with a vote of thanks.

The report of the Legislative Committee, R. C. Fulbright, of Houston, Texas, chairman, dealt very fully with the activities of the committee in keeping track of federal legislation during the past year, particularly in connection with Section 15a of the Transportation Act and the Howell-Barkley Bill. Mr. Fulbright did not read the report, but addressed the meeting on the present general situation. He showed that the shippers and the railroads are agreed on the policy of working together to support our general system of governmental regulation, which is the best system yet devised. Shippers and carriers are agreed that Congress should not try to deal with intricate questions which have been delegated by law to a body of specialists—the Interstate Commerce Commission. Volunteer rate theorists are still active, and the present duty of the League and of all good citizens is to oppose attempts to modify Section 15a. Each suggested substitute or alteration contains possibilities of any number of unwise proposals.

Mr. Fulbright felt sure that the only legislation adverse to reasonable regulation of transportation which is liable to be seriously considered in the coming short session of Congress were the Gooding bill, calling for the modification of the fourth section in favor of the inter-mountain interests, and possibly the Howell-Barkley bill, which aims to get rid of the United States Railroad Labor Board. He pointed out the absurdities of the recapture clause of the transportation act; a road which can qualify under this clause as a hopeful borrower before the Interstate Commerce Commission is equally well prepared to borrow money in the open market, and at a rate of interest less than that (six per cent) to which the commission is limited by the law. Mr. Fulbright, though a citizen of a Democratic state, rejoiced in the result of the last national election, hoping that in the new Congress there could be a sane discussion of the whole question of railroad regulation. As to the Howell-Barkley bill its vicious clauses need but to be examined with care to be condemned by all business men; if the members of the League will stand together in making known their views to members of Congress the bill will never be passed. The utmost vigilance will be necessary, however, for the labor union lobby at Washington is manned by skillful specialists versed in all the arts of sophistry. The Gooding bill, in particular, must be watched, as it has already passed the Senate. This bill is statutory rate making, to which the League is opposed on principle; the League demands that the Interstate Commerce Commission have more latitude rather than less.

This report contained a review of the legislative history of the statute of limitations as related to overcharges and undercharges; and noticed the repeal of the war tax on telegraph and telephone messages and the demand for a more liberal rule as to credit on payment of freight bills. Business men generally desire to settle freight bills at ten-day intervals, but it is doubtful whether the commission has power under the law to authorize weekly settlements; and the removal of present unsatisfactory conditions is a perplexing problem.

Those parts of the report concerning abandonment of water lines and liability of consignees and consignors on undercharge claims were withdrawn; after which the report as a whole was adopted. There followed an informal discussion as to just what attitude the League should take before the coming short session of Congress, particularly with regard to the Howell-Barkley bill. In view of the unsettled situation at Washington, it was the sense of the

meeting that though the League should continue to oppose this measure, the further recommendation of the committee, to the effect that this opposition should include constructive proposals for legislation, be not approved. On section 15a the meeting was unanimous that no change ought to be made at the present time.

It was moved that the action of the League opposing any meddling with section 15a be put in print by the secretary and that copies be sent to President Coolidge, to every member of the cabinet and every member of Congress; and to the members of the agricultural commission recently appointed by the President. This motion was adopted, after being amended to include instructions to the League's committee which is going to Washington (to ask for better financial support for the Interstate Commerce Commission) to wait on the agricultural commission and present the views of the League.

Various Committee Reports

The report of the Committee on Highway Transportation, W. J. L. Banham, chairman, summarized the present situation as regards proposals to establish store door delivery, and on motor truck regulation. The report makes no specific recommendation, but some of its very definite statements of the views of the committee were criticised by a New England member as likely to have the effect of recommendations; but, after considerable discussion, the document was accepted as a report of progress. Mr. Banham was of the opinion that railroad interests and automobile truck interests are getting better acquainted with each other, and are more friendly.

The Committee on Passenger Traffic presented a brief report on the present status of the movement to secure the discontinuance of the surcharge on passenger fares in Pullman cars, which report was adopted.

The Weighing Committee, C. T. Bradford, chairman, reported that it had held three conferences with the Weighing Committee of the A. R. A., discussing proposed changes in the code of weighing rules. The present report recommended changes in the language of Rule 2, and Rules 5A and 7B. These proposals were approved, and the rest of the report was accepted as information.

The special committee appointed to confer with railroad traffic executives, W. H. Chandler, of New York, chairman, was made a standing committee. The Freight Claim Committee and the Claim Prevention Committee were consolidated, the new committee to be "the Freight Claim and Claim Prevention Committee."

The special committee on charges for spotting cars, etc., P. M. Hanson, chairman, presented a report reviewing the law and the action of the Interstate Commerce Commission in this field and expressed the conclusion that there is no fear of the carriers discontinuing spotting service or making a charge for such services. The committee does not believe that there is any justification for a general rate for spotting services; and is not disposed to disturb long-established custom. This report was accepted and the committee continued.

The committee on Claims Prevention, C. B. Baldwin, chairman, made a report of progress. The committee is now in touch with the American Railway Association, and members sit in with the railroad committee. The chairman said that the American Railway Association has established a new committee to take over the work of Colonel B. W. Dunn's staff, in connection with standardization of packages. Proposed specifications for packages will not be published until after a conference with representatives of the League. A resolution was adopted instructing the chairmen both of the freight claim committee and the classification committee to sit in with the railroad committee.

Seth Mann, chairman of the special committee on Merchant Marine, presented a series of declarations confirming the previous action of the League in this matter. None of the proposed amendments to section 28 of the Merchant Marine Act remove the objections to act heretofore formulated by the League. Mr. Mann's report was adopted.

In connection with its activities to promote the Merchant Marine, the Shipping Board proposes to send out a questionnaire designed to find out the present status of public sentiment, and desires co-operation of the League. It was voted that the executive secretary should ask for copies of the questionnaire, to be sent by him to the whole membership of the League, with a circular urging the prompt dispatch of responses to Washington.

The special committee on Embargo Rules, Charles Orchard, chairman, made a brief report of progress. No serious questions have been brought before the committee during the year. Per diem Rule 16 has been changed so that embargoes go into effect only after 48 hours instead of 24 hours. This report was approved.

The special committee on Telegraph Liability, H. L. Goemann, chairman, made a brief report which was accepted without discussion.

J. P. Haines, chairman of the special committee on the Fourth Section, made a brief report on the Gooding bill. He believes that strong opposition will be necessary to prevent the passage of this bill by the lower House of congress. Congressional pressure on the Interstate Commerce Commission in favor of the inter-mountain demands for a rigid fourth section is always strong. If the bill is put upon the calendar of the House, members should individually communicate with their congressmen without delay, and the League should ask to be heard by the House committee. It was voted that the executive secretary should, by circular, keep the membership advised of the course of events in connection with this bill. The report was accepted, and the committee which is going to Washington was instructed to look after the matter. Mr. Chandler, speaking for New England interests voted against this action, the New England shippers not having decided to oppose the Gooding bill in toto.

On motion of A. P. Little the action of a recent conference at the Department of Commerce, Washington, looking to the adoption of a standard form of warehouse receipt was briefly discussed, and it was voted that a special committee should be appointed by the president to attend any further conference on this subject which may be called. President Ripley appointed as this committee Mr. Little, Mr. Hilleary, of New York, and Mr. Dayton, of Chicago.

The next annual meeting of the League will be held in Chicago in November, 1925.

The committees appointed at this meeting to go to Washington are constituted as follows:

The one directed to ask for a reasonable appropriation for the work of the Interstate Commerce Commission for the next fiscal year consists off: P. M. Ripley, R. C. Fulbright, J. M. Belleville, W. H. Chandler, L. M. Walters and J. H. Beek.

The matter of protests against unfavorable legislation was left in charge of J. M. Belleville, R. C. Fulbright, Herman Mueller, P. M. Ripley, R. W. Poteet and L. M. Walters.

Political Rate-Making

After the committee reports were disposed of there was a brief discussion on the proposal, with which all citizens became acquainted during the presidential campaign, to make a general readjustment of freight rates, with a view to meeting the demands of the farmers for a reduction of their transportation burden—though, of course, there was no specific mention of farmers. Acting on a motion by C. E. Childe, the meeting adopted unanimously the following:

RESOLUTION

Whereas, There is a growing tendency on the part of governmental agencies and executives to advocate a general revision of

the entire freight rate structure of the United States, so as to reduce rates on so-called basic commodities and increase rates on manufactured articles and other traffic moving under class or commodity rates, and there are pending before Congress bills and joint resolutions designed to bring about such result; and

Whereas, The National Industrial Traffic League, through its membership, represents a large percentage of all shippers of freight throughout the United States, furnishing the carriers a very large proportion of the entire tonnage carried, ranging from crude raw materials to high-grade manufactured products, including products of agriculture, mines and forests, and

Whereas, Existing law gives to the Interstate Commerce Commission full power and means, after full investigation into all the facts and circumstances, for relieving shippers individually and collectively from unreasonable or discriminatory rates and charges; and

Whereas, Under the established and orderly processes of rate construction and regulation, through a long period of years, the commerce and industry of the country have reached their present high state of development; and

Whereas, Any wholesale revision of the rate structure of the United States at this time would seriously handicap the carriers of the country, render uncertain their prospective earnings and cripple their efforts to finance needed improvement of facilities; and would seriously hamper manufacturing industries and commercial enterprises in developing markets for their products; disturb every character of business endeavor and precipitate an era of business depression;

Be It Resolved: That the National Industrial Traffic League is opposed to any attempts at general rate readjustments based upon political expediency or unproved theory; and that the League respectfully and earnestly urges upon the Executive and legislative branches of our government that the entire question of freight rate revisions be left solely in the hands of the Interstate Commerce Commission, which has throughout a period of 37 years ably and adequately safeguarded the interests of the public.

Committee on Utilization of Forest Products

WASHINGTON, D. C.

PLANS for an organized permanent campaign for the better utilization of forest products, particularly by stimulating the proper agencies to apply commercially the available knowledge on the subject as well as to supply additional knowledge on better utilization as the result of research and experience, were adopted at the closing session of the National Conference on Utilization of Forest Products, called by the late Secretary Wallace of the Department of Agriculture, at Washington on November 20. The conference approved a report by the committee on permanent organization and program, which recommended that the members of the Central Committee on Lumber Standards, which has been co-operating with the Department of Commerce and the Department of Agriculture, be asked to assume the responsibility of guidance of the movement for the better utilization of forest products and the elimination of waste. The committee will function under the name of the Central Committee on Utilization of Forest Products, making such addition to its membership as it deems proper to carry out the purposes.

This committee is representative of the lumber manufacturers, distributors, wood-using industries, architects and engineers.

In its statement of the problem the committee said:

An adequate supply of timber is essential to the industrial development of the country and to the maintenance of present standards of living, as well as to the prosperity of the people and industries dependent upon the forests.

Regional timber shortages and consequent high costs are already making themselves felt to manufacturers and users alike, and will become increasingly serious during the many years needed to get an adequate program of timber growing into effect.

More careful utilization of forest products offers an immediate means of prolonging our supply of timber and should be recognized in the national program of forestry as of equal importance with timber growing and protection.

Knowledge of better utilization has outstripped practice, and should be applied wherever economically feasible, as a necessary measure to reduce the drain on the forests. Through further research, understanding, and co-operation it will be possible still further progressively to reduce the drain on the forests.

Reducing needless drain will tend to lower the cost of raw material, will create additional sources of profit from material now wasted, and will lengthen the life of plant investments by prolonging the supply of raw material.

The task of reducing these losses is a joint responsibility of the industrial, commercial, agricultural, governmental, educational, and professional interests, and the general public.

The program of activities outlined in the report includes both those in which commercial application of available knowledge is the pressing need and activities in the research field.

The first group includes projects in which a large amount of information is already available and in which the chief effort of the permanent organization should be to get the information into commercial practice. The following projects of this nature are recommended:

Arrange for the completion and general adoption and application of lumber standards as recommended by the Central Committee on Lumber Standards.

Encourage a wider use of dimension stock by standardizing sizes to the lowest practical minimum.

Develop the application of scientific principles to the problems of piling, storing, and drying lumber, in all its forms.

Encourage the maximum service of wood by preservative treatments, in all situations where decay is a factor in its service.

Extend the further use of approved methods for preventing the decay of pulp and pulpwood in storage.

Give consideration to scientific methods for the arrest and prevention of decay in logs and lumber.

Encourage surveys with the objects of utilizing waste products through diversified operations.

Develop, improve, and unify building codes; improved designs of boxes and crates; and other economies that may suggest themselves to the committee.

Make effective the improvements and economies that have been developed in the use of forest products by getting together the organized industrial units which consume these products and encouraging their members to take full advantage of improved practices.

In all public construction—municipal, state and national—insist upon the use of the improved practices which are herein recommended.

Collect all information that has already been developed by various organized units related to the use of wood and formulate a permanent plan for its distribution and application.

In the Research field the lines of investigation which, in the opinion of the committee, require first consideration include: (1) Woods Losses. (2) Sawmill Waste. (3) Little-Used Species. (4) Properties of Wood. (5) Timber Survey. (6) Wood-using Industry Survey. (7) Forest Protection. (8) Tropical Woods.

"A comprehensive program of research such as has been indicated," the committee said, "requires the participation of federal and state agencies, the forest schools and other technical institutions, and the forest industries. Certain investigations lie largely within the province of the federal government, such as the proposed timber survey, a national study of woods and sawmill waste and laboratory studies which require large and expensive equipment. In these, however, co-operation by other public agencies and the industries is essential. Basic research and many local studies will, as heretofore, be conducted by educational and technical schools. The individual states should provide means to enable their forestry departments to conduct independent research and to co-operate with the government. The industries can not only co-operate with the public quasi public research agencies, but,

the committee believes, go much further than at present in research designed to meet their special problems.

"The Central Committee on Utilization of Forest Products can render a great service in stimulating interest in research and can undoubtedly aid in securing greater support for research agencies. The committee will be in a position to point out to the research agencies the problems of special importance to the industries that need investigation; and can exercise great influence in bringing about a larger participation in active research work by the various industries."

Freight Rates and Potato Prices

WASHINGTON, D. C.

TRANSPORTATION COSTS permit a wide distribution of potatoes from the various producing areas to the great consuming centers. The range in the prices received by the producer and in the prices paid by the consumer for potatoes varies without reference to transportation charges. In fact, freight rates are not the controlling factor in the marketing of potatoes. These facts were brought out in a study just completed by the Bureau of Railway Economics into the relationship of prices paid to producers, wholesalers and retailers of potatoes to transportation costs. The Bureau reaches the following conclusions:

1. That prices paid to producer, wholesaler and retailer of potatoes show a market fluctuation for the various kinds and grades, although the freight rate remained unchanged.

2. That the fluctuations in prices paid to the farmer are as high as 225 per cent of the minimum price. These fluctuations in some cases exceed the freight rates even to distant markets.

3. That freight rates are not controlling in the marketing of potatoes, because the product is frequently distributed to consuming centers located far distant from producing sections at higher freight rates than to nearby markets.

4. That prices in the retail markets are often higher on potatoes produced in nearby territories than on those shipped from far distant points on higher freight rates.

5. That the spread between retail and wholesale prices in consuming markets varies without reference to transportation charges.

6. That in the marketing of potatoes, whether at the point of production, or in the wholesale or retail trade, supply and demand, variety and grades, methods of grading, storage, and marketing practices are the primary factors influencing the price to producer and consumer—not transportation costs.

The study, covering a year ending October 1, 1924, was based upon prices secured from 37 points of production and retail prices in 32 cities from more than 3,000 retail stores. The prices at point of origin were obtained by railway agents, wholesale prices from the official reports of the United States Bureau of Markets, and retail prices by railroad agents in 32 important representative centers.

The study shows that in the marketing of potatoes, fluctuations in prices were due entirely to causes beyond the influence of freight rates, which remained stationary during the period studied. To the shipper of potatoes, the principal factors of primary concern relative to transportation are that railway service and car supply shall be adequate to enable him to transfer his products into the markets promptly, and that freight rates shall be such as will permit him to ship his products into a wide range of territory.

The bulletin shows that during the year ended October 1, 1924, the range in prices paid to producers was several times as great as the total freight rate to markets. For instance, at Bloomer, Wisconsin, the price fluctuated 75 cents per hundred pounds, or more than three times the freight rate to Chicago, while the fluctuation at Traverse City, Michigan, was 65 cents per hundred pounds or more than twice the freight rate to Detroit and nearly twice the freight rate to Chicago. At Caribou, Maine, prices fluctuated $1.07 per hundred pounds which was more than twice the freight rate to Boston and nearly twice the freight rate to New York while at Twin Falls, Idaho, there was a fluctuation of 85 cents per hundred pounds which was more than the freight rate to Chicago, Los Angeles and Kansas City.

Retail prices at representative consuming markets such as St. Paul, Boston, New York, Philadelphia, Washington and Chicago also showed wide fluctuations during the year despite the fact that freight rates from producing centers to these points remained stationary. This study shows that although freight rates from points in Pennsylvania to Philadelphia were less than those from Maine, potatoes from Pennsylvania were sold at higher price than potatoes from Maine.

Similar fluctuations in the wholesale prices paid on the same day for the identical kind and grade of potatoes were also developed by the study.

"This clearly indicates", the bulletin said, "that factors other than freight rates, such as nature of package, variety, grade and other conditions are the controlling elements in establishing prices in the wholesale market".

In respect to the assertion that transportation costs do not restrict the movement of potatoes to nearby markets, the bulletin said:

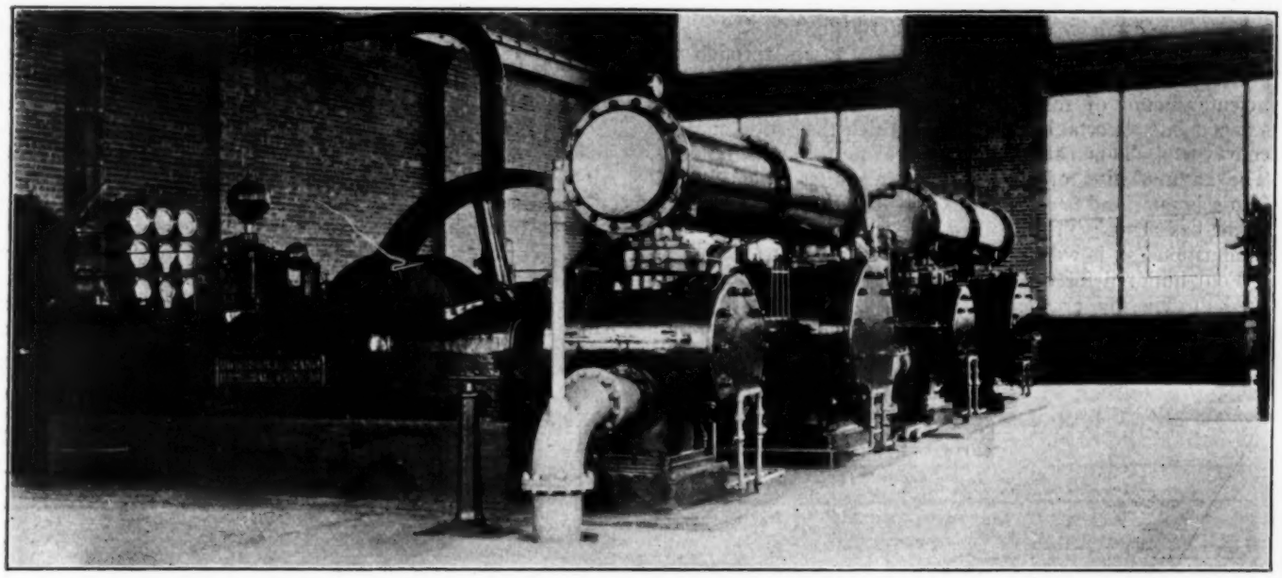
"During the calendar year 1923, there were only 562 carloads (or 2.9 per cent of total carlot shipments from the State) of Michigan potatoes unloaded in Chicago, while at the same time 881 carloads were shipped from Michigan to Washington, D. C., 431 carloads to New York and 1,504 carloads to Pittsburgh, although the freight rate to Chicago was less than to the other cities. During the same period there were shipped into Chicago 1,538 carloads from Idaho on a higher freight rate and 1,865 carloads from Minnesota, from which state freight rates were generally higher than from Michigan. There were also more carloads of Michigan potatoes unloaded in Cincinnati (580 cars) than at Chicago although the freight rate was higher. There were unloaded at Cincinnati 948 carloads of Minnesota potatoes or 368 cars more than were shipped from Michigan, while at the same time Michigan was shipping into distant markets such as Pittsburgh, New York and Washington, D. C.

"It is apparent that greater progress must be made within the potato industry toward more orderly and efficient marketing, if producers are to realize better prices for that commodity.

"The custom for years has been for one producing section to raise and market this commodity without relation to or knowledge of conditions in other producing districts, whose competition is met in central markets. Today a shipper of potatoes in one territory rarely, if ever, has knowledge of the competition he will encounter when his car arrives at destination. Carloads of potatoes originating in one territory are often peddled from place to place seeking a favorable market.

"Much can be gained by the establishment of definite points of contact between producers in different regions, and such dissemination of information regarding market conditions as will be of immediate and current value to shippers and receivers in promoting an even flow of this commodity to markets in relation to demand. Unlike other perishable products, this commodity enjoys almost a uniform consumption, consumers' demands permitting of more even distribution to markets and greater stability of price.

"Whatever the final remedy may be to effect the results desired, the initial step is that of a closer relationship between shippers in one producing area with those of another, and an expansion of the services of the Bureau of Agricultural Economics of the Department of Agriculture."

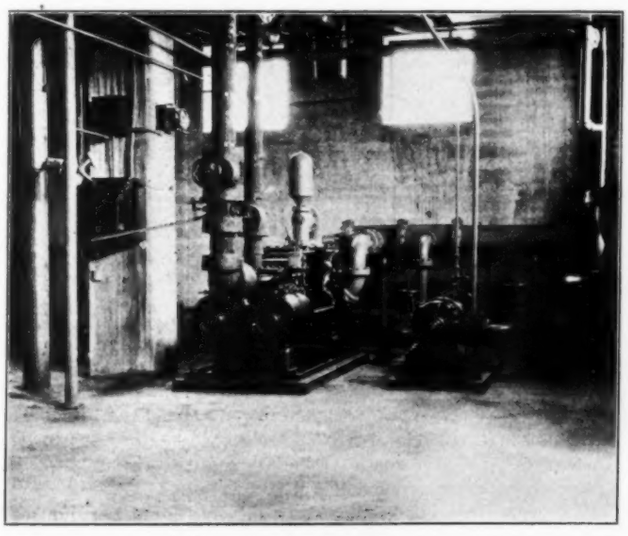


The Engine Room of the Chicago, Burlington & Quincy Power Plant at Denver, Colo.

C. B. & Q.'s Model Coal Burning Power Plant

Steam Generated for Shop Requirements and for Compressing Air—Electric Power Is Purchased

A POWER PLANT for serving the needs of the new Chicago, Burlington & Quincy shops at Denver, Col., has recently been completed. Steam generated in the plant is used for compressing air, for heating, for operating steam hammers in the blacksmith shop, etc. Electric power



Steam and Electric Pumps for Filling Standpipe Located in the Basement Below the Switchboard

for operating motors and for lighting is purchased from the Public Service Company of Colorado. The facilities served by the power house include a machine and erecting shop, blacksmith shop, boiler shop, oil house, and store house and offices. Facilities are available for classified repairs to 200 locomotives and running repairs to 50 per month. The machine and erecting shop is 509 ft. long and 243 ft. wide.

The power plant is a brick building 128 ft. long by 89 ft. wide and about 60 ft. high at the highest point. The concrete stack is 250 ft. high with an inside diameter of 12 ft. at the top. The building is well lighted during the daytime by large metal sash windows. All of the equipment is located on the operating floor except for the coal bunkers above the boilers and for the ash handling equipment, pumps, lockers, thermostatically controlled showers, etc., which are located in the basement.

Coal and Ash Handling Equipment

Services of a switch engine for spotting coal and ash cars are minimized by a motor driven winch which is used for spotting cars. Push-buttons for starting and stopping the 7½hp. motor which drives the winch are located within easy reach of the operator.

The one conveyor, which is of the Link Belt pivoted bucket type, is used for handling both coal and ashes. The coal dropped from the cars can be run through a crusher on its way to the conveyor if desired. When coal is taken from the cars the conveyor buckets are tripped over the coal bunker. This bunker has four compartments and is located directly over the firing aisle between boilers; it has a capacity of 250 tons. From the bunker the coal can be discharged into a weigh lorry which is suspended from a beam over the center of the firing aisle and which can be moved manually to any desired position so as to deliver coal to any one of the four boilers. The lorry is equipped with Kron scales and has a capacity of 2,000 lb.

From the lorry the coal is dropped into any one of the boiler coal hoppers. These hoppers in turn deliver the coal to Geco chain grates. Ashes fall off the end of the chain grates into ash pits under the boilers where they are kept wet by sprays controlled from the boiler fronts. Ashes are disposed of at the end of each shift. They are raked out of the ash pits onto the conveyor which carries them to the ash

hopper, from which they are dropped into cars on the loading track. The capacity of the hopper is 100 tons.

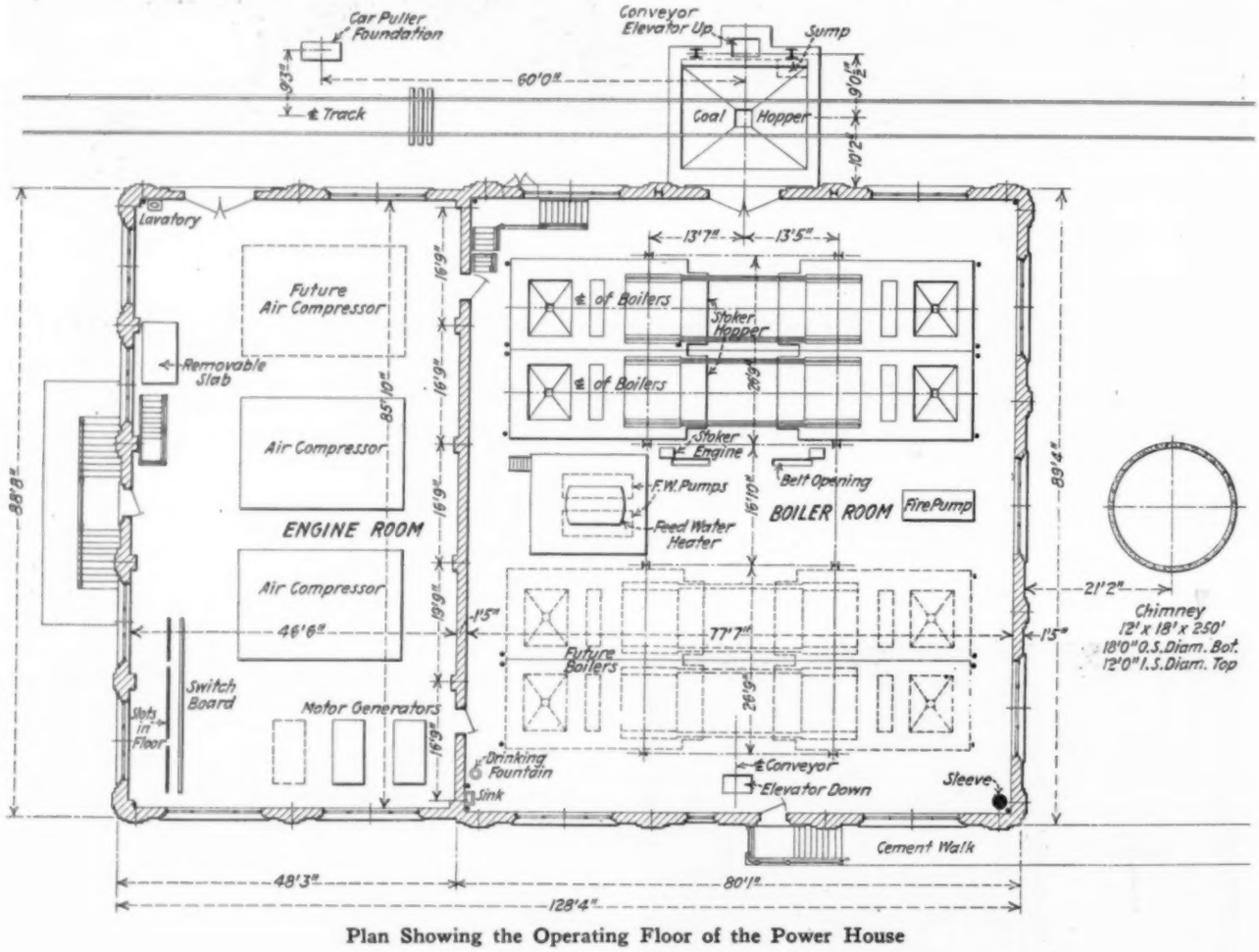
Green or partly burned coal, which passes through the grates, falls into a dry pit above the ash pit. When a sufficient amount of these droppings have collected they are scraped into a portable chute down which they slide onto the conveyor. This carries them back to the coal bunkers. The accumulation of ash in the combustion chamber falls into a hopper and is removed to wheelbarrows through chutes in the basement. These chutes have self-sealing gates. The combustion ash is wheeled to the conveyor.

Four-hundred-forty-volt alternating current motors are used to drive the crusher and conveyor. A 30 hp. motor is used for the crusher, a 5 hp. motor for the conveyor apron and a 30 hp. motor located just under the roof drives the conveyor. The three motors are controlled by Industrial Controller automatic compensators. The conveyor can be started or stopped from the basement or from the runway over the coal bunkers. It is interlocked with the conveyor apron so that the conveyor can be operated separately, but the apron cannot be started unless the conveyor is running.

The boiler room is equipped with four 406 b.hp. Heine water tube boilers designed to cary 180 lb. pressure and operated normally at 150 lb. The fireboxes are provided with Green fuel retarders. These in effect are an adjustable section of the water back located over the inner end of the grate. This is adjusted according to the thickness of the fire so that an excess of air does not go over the fire to the stack. It also prevents green coal from being carried over the end of the grate.

Precision draft gages show draft at last pass and draft over the fire. The draft and the stoker speed are controlled by an A-Jacks automatic regulator governed by boiler pressure. The amount of draft is maintained at the minimum which will burn all of the coal by the time it reaches the back of the grate. The four stokers are driven by two Green stoker engines placed on opposite sides of the firing aisle. A cross belt under the boiler room floor connects the stokers on opposite sides of the aisle so that either engine can be used to drive any one or all four of the stokers.

The boilers are equipped with dual feed lines, Reliance high and low water alarms, Green high pressure water backs, Foster superheaters, and Republic indicating flowmeters which show the flow of steam from each boiler. Automatic,

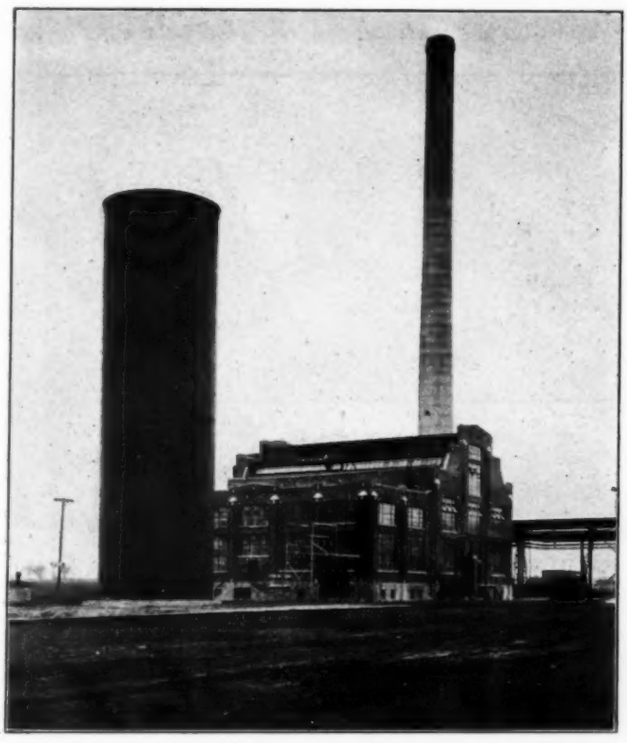


Plan Showing the Operating Floor of the Power House

non-return stop valves are also placed in the header lines at the boilers. Blow-off lines have double valves, two in series. The flue sheets have key caps instead of gasket plates and the superheaters are provided with Bayer steam soot blowers. Provision has been made for doubling the capacity of the boiler room when it becomes necessary.

All water used in the shops and in the power house is taken from two wells 550 ft. deep, by air lifts. Each lift has a capacity of 300 gal. per min. The water is discharged from the lift into a two-part cistern, one side of which has a capacity of 10,000 gal. and the other 20,000 gal. Water from the lifts flows into the smaller side and overflows into the larger. Drinking water is pumped from the smaller side of the cistern through the drinking water supply lines in the shops and back into the larger section of the cistern. This water is kept in circulation so that it is always cool.

A duplex steam pump located in the basement of the power house pumps water from the 20,000 gal. cistern to a standpipe having a capacity of 500,000 gal. A motor driven



The Power Plant Showing Standpipe, Outdoor Substation and Air Receivers

centrifugal pump is used as a standby for the same purpose.

Two duplex feed water pumps in the boiler room take water from a Worthington open heater and deliver water to the boilers at a temperature of 210 to 212 deg. F. The steam ends of the feed pumps are equipped with pressure regulators so that throttling of the discharge line will not cause excess pressure to blow out gaskets in the feed water line. The fire pump also located in the boiler room is a Worthington duplex with a capacity of 1,500 gal. per min. at 150 lb.

Water, Steam and Air Lines

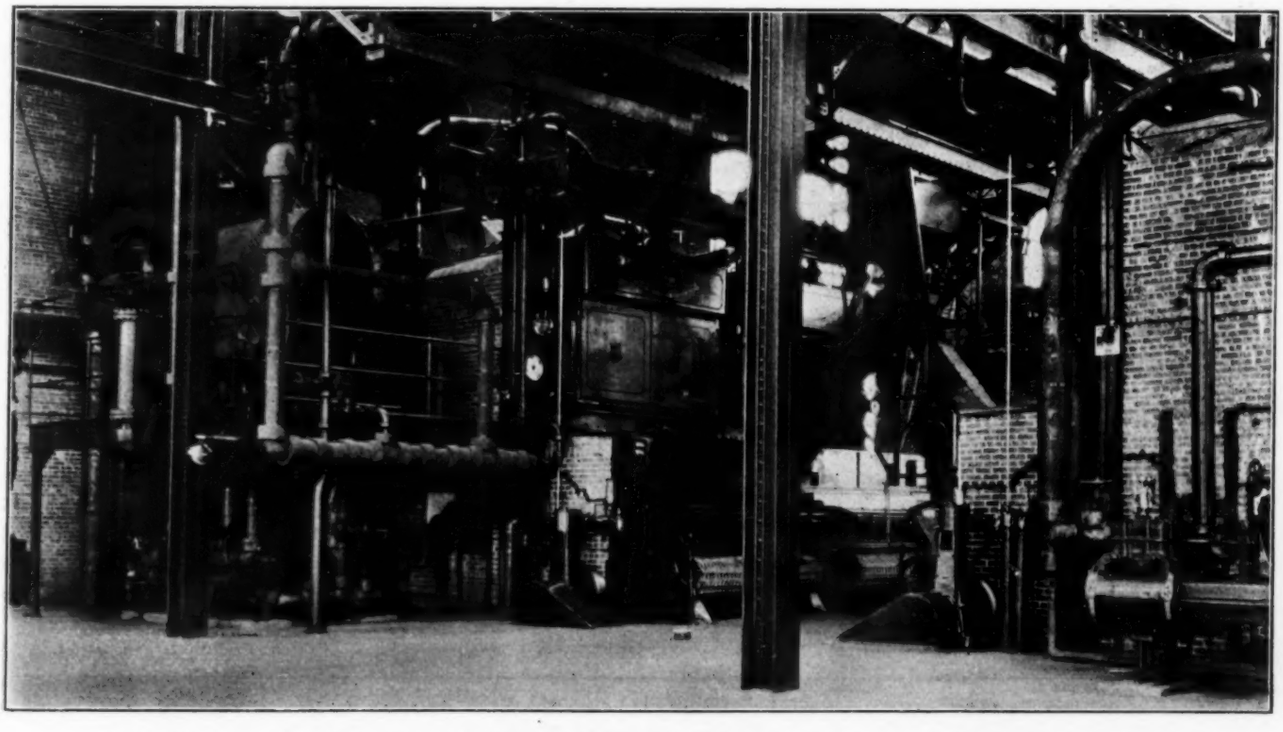
All high pressure steam lines are painted black, exhaust steam lines orange, feedwater lines maroon, return lines green and air lines brown. Exhaust steam is used for heating the shop buildings and for heating water. Live steam can also be used for heating. Condensate is returned to the receiving tank and through the feedwater heater back to the boilers.

Steam hammers in the blacksmith shop and all other steam driven apparatus is exhausted into the low pressure lines. Low pressure steam line pressure is about 4 lb. and about 5 per cent of make-up water is required.

The heating of the shops is accomplished by both direct and indirect radiation, the indirect system being used in the machine and erecting shop and in the boiler shop. The fans used for indirect heating are steam driven and all steam condensed in the shops is taken out of the exhaust line and pumped by separate pumps to the receiving tank in the power house boiler room.

Walworth valves, with bypass feature to prevent possible damage caused by opening large valves, are used on the high pressure steam lines. These lines are bled by Crane tilting steam traps, one of the traps being placed just ahead of the fire pump so that the pump is always ready for instant use. The boiler feed water line is protected by pressure relief valves.

The apparatus in the engine room consists essentially of two steam driven air compressors, two motor-generator sets, a gage board, a flow meter, a switchboard and an overhead crane. The air compressors are Ingersoll Rand, cross-compound, two-stage compressors having a capacity of 3,444 cu. ft. per min. They have overspeed safety stops and the compressors as well as all reciprocating pumps are equipped with Hills-McCanna force feed lubricators. Air is taken



The Boiler Room. Feed Pumps and Heater Are Shown at the Left and a Part of the Fire Pump at the Right

in from outside through Midwest capillary air filters located just below the engine room floor and is discharged into two air receivers placed outside of the power house. Four curve drawing meters record degrees superheat, feed water temperature, boiler pressure and flue gas temperature. The flowmeter is a Simplex venturi recording and integrating flowmeter which records rate of flow and total flow of boiler feed water. A 10-ton manually operated Conco crane serves the entire engine room.

Electric Power Supply

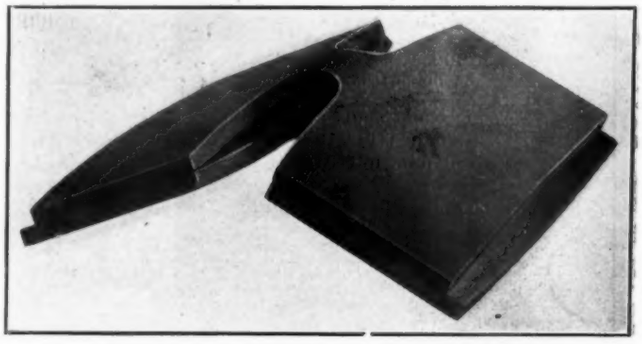
All electric power is purchased from the Public Service Company of Colorado. It is received as three-phase, 13,200-volt, 60-cycle 3-phase alternating current power at an outdoor substation alongside the power house. In the substation the voltage is stepped down to 440 and carried into the power house through lead cable in 4-in. rigid metal conduit. The substation equipment which is enclosed in a non-climbable type fence, consists of air switches, choke coils, potential and current transformers, General Electric oxide film lightning arresters, and three, 333-k.v.a., 13,200 440-volt Westinghouse power transformers. The power is metered on the high voltage side ahead of the transformers.

The 440-volt power is controlled and distributed at the switchboard in the power house. Direct current power for cranes, variable speed motors, etc., is provided by the two motor-generator sets. The sets are identical and each one consists of a General Electric 300-hp. 440-volt, 60-cycle, 1,200-r.p.m. synchronous motor driving a 200-k.w., 250-volt, direct current generator.

There are 13 panels in the switchboard. The power is carried from the power house to the shops by lead cables in clay duct.

A Friction Spring Bolster Cushion

A FRICTION SPRING TRUCK BOLSTER cushion which replaces truck springs of the ordinary type, has been developed by Frost Railway Supply Company, Detroit, Mich. This device known as the Harvey, friction bolster cushion consists of a top and a bottom malleable iron casting, called caps, and a series of concave and convex plates of spring steel. The plates and spring caps have angles sloping from the center outward, the top cap being concave and the bottom cap being convex. All plates and caps have the same angle with the horizontal. Each plate is cut out along the center axis into two sections which are joined by a narrow strip of the metal. It is this center portion or neck that is bent to give the two sections of each plate the correct angle to the horizontal. The whole assembly of plates and caps is held together by two long rivets. When the assembly is loaded, the lower heads of the rivets move down in pockets provided in the lower cushion cap. Only the ends of each

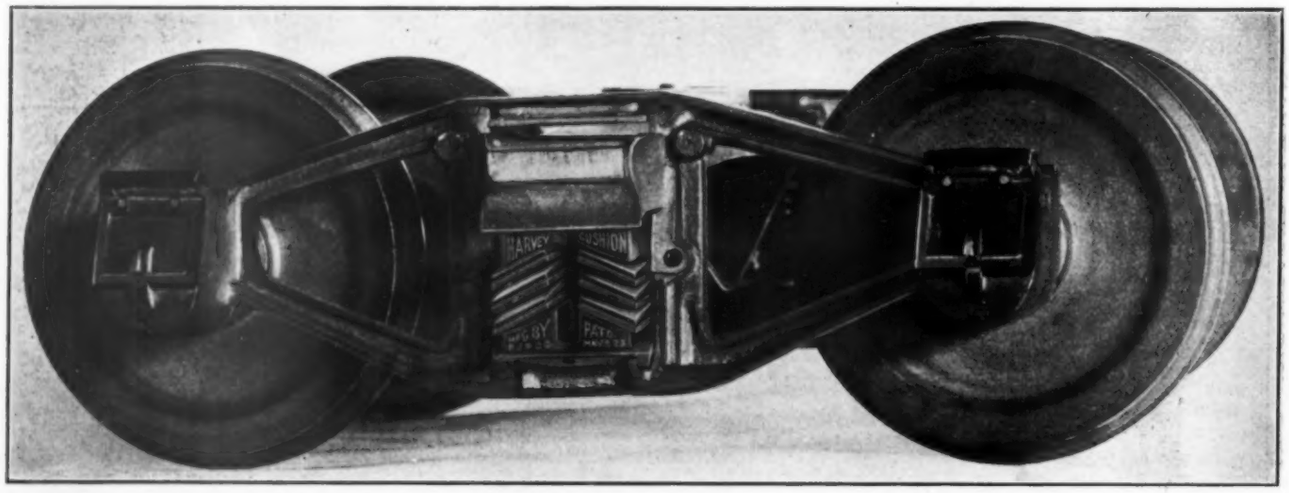


A Pair of the Cushion Plates

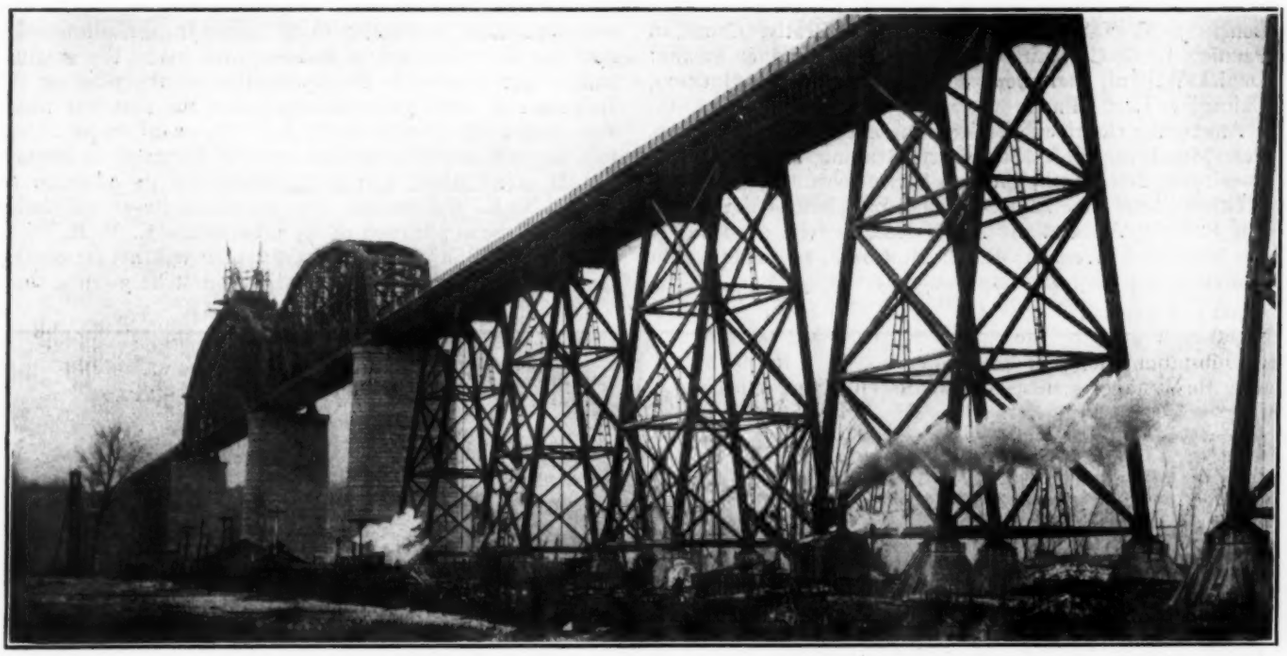
pair of cushion plates are in contact on each side of the cushion. Each pair of plates is in contact with the next pair at the middle, and the top and bottom pairs are in similar contact with the top and bottom casting.

Thus it will be seen that as a load comes on the cushion each set or pair of plates bends closer together. Owing to the angle on the two sides of the cushion, the ends of each pair of plates must slide on each other. This slipping of the two plates that make up each pair is sufficient to produce several hundred foot pounds of absorption when the cushion is compressed and released. This absorption is said to be sufficient to stop the lateral rocking of the car. This rocking which is quite often caused by the time of vibration of the car body synchronizing with the passing of low joints, causes the bolster to move up and down on the side frame, when equipped with coil springs, as much as 1½ in. in the full capacity of the springs. In road tests of the Harvey cushion the maximum movement of the bolster up and down on the side frame, is said to have been less than ⅜ in., which means that the rocking of the cars was very much reduced.

These springs are made to interchange with the ordinary nests of springs, so that they involve no change of standards. They are supplied in two classes, one for cars of 50 tons and under, and one for cars of over 50 tons. They can also be furnished for locomotive tenders.



Application of the Harvey Friction Bolster Cushion, Showing How the Complete Assembly Is Held in Place Between the Truck Bolster and Spring Plank



Castleton Bridge—Now Known as the A. H. Smith Memorial Bridge

Castleton Cut-Off Opened for Freight Service

Railway Presidents Participate in Formal Dedication of New York Central's $25,000,000 Project

THE new Castleton cut-off of the New York Central was opened to traffic on November 20, the inauguration of service over this line being featured by a number of formal activities participated in by over 800 railway executives, officers and guests. The cut-off represents an expenditure of approximately $25,000,000 and involves about 28 miles of new double-track construction, a high level bridge over the Hudson river about 12 miles below Albany, N. Y., a mile long, and a large freight and engine terminal. Special trains were operated to Albany from the east, west and south on the night of November 19. On November 20, a special train was operated out of Albany and over the new work, following the return of which there was given a luncheon at the Hotel Ten Eyck. Over 25 railway presidents and chairmen of boards attended.

The Castleton cut-off is an important new freight line and yard project by means of which the New York Central will be enabled to by-pass badly handicapping grades into and out of Albany as well as to eliminate the many delays resulting from the low level drawbridges across the Hudson at this point. The general scope of this project as well as many of the details of design and construction have appeared in articles on page 1246 of the May 27, 1922, issue, and page 1681 of the June 30, 1923, issue of the *Railway Age*. This project gives the New York Central a new low grade line to the south of Albany, with double-track connections to the Boston & Albany, the New York Central proper and the West Shore. The line crosses the Hudson river on a double-track bridge, 135 ft. above the water and with channel spans of 600 ft. and 400 ft., the remainder of the bridge being of steel viaduct construction. A large engine terminal and freight classification yard is located at Selkirk, N. Y., and consists at present of two engine houses of 31 stalls each, machine shop, car repair facilities, east and west bound receiving, classification and departure yards and humps and special fast freight yards.

The inspection party made up for the formal opening of the project left Albany at 9:00 a. m. on a special train, which was the first train to cross the bridge, proceeding over the Boston & Albany to Niverville and thence over the connection and the bridge to the Selkirk yard, passing down one side of the yard and back on the other, returning to Albany via the Albany branch of the West Shore. This inspection was followed by a luncheon at the Hotel Ten Eyck, at which P. E. Crowley, president of the New York Central, presided. In memory of the railroad's late president and of his activities in connection with this project, the Castleton bridge was formally named the Alfred H. Smith Memorial Bridge.

Among those who attended the inspection and the luncheon were the following directors of the Central: W. S. Hayden, E. S. Harkness, A. H. Harris, Bertram Cutler, George F. Baker, M. C. Taylor, Ogden Mills, J. E. Reynolds, H. S. Vanderbilt and W. K. Vanderbilt. The guests included the following railroad presidents: A. T. Dice, Reading; J. B. Kerr, New York, Ontario & Western; W. H. Truesdale, Delaware, Lackawanna & Western; E. E. Loomis, Lehigh Valley; E. Coykendall, Ulster & Delaware; J. H. Hustis, Boston & Maine; M. C. Byers, Western Maryland; W. T. Noonan, Buffalo, Rochester & Pittsburgh; W. H. Finley, Chicago & North Western; Percy R. Todd, Bangor & Aroostook; F. D. Underwood, Erie; F. H. Alfred, Pere Marquette; W. B. Storey, Atchison, Topeka & Santa Fe; W. G. Besler, Central of New Jersey; J. N. Beckley, Toronto, Hamilton & Buffalo; H. R. Kurrie, Chicago, Indianapolis & Louisville; W. R. Cole, Nashville, Chattanooga & St.

Louis; J. E. Taussig, Wabash; E. W. Beatty, Canadian Pacific; J. E. Gorman, Chicago, Rock Island & Pacific; Daniel Willard, Baltimore & Ohio, and W. J. Jackson, Chicago & East Illinois.

Among the chairmen of boards present were E. N. Brown, Pere Marquette; E. T. Stotesbury, Reading, and O. P. Van Sweringen, New York, Chicago & St. Louis.

Other guests were R. H. Aishton, president of the American Railway Association; A. C. Needles, vice-president of the Norfolk & Western; R. E. M. Cowie, president of the American Railway Express Company; M. J. Van Sweringen, vice-president of the New York, Chicago & St. Louis; William A. Prendergast, Public Service Commission of New York, and F. I. Cox, of Interstate Commerce Commission.

The Opening of the Castleton Cut-Off was Well Attended by Railway Presidents and Other Executives

B. & O. Plan to Be Applied on the Canadian National

THE MANAGEMENT of the Canadian National has decided to put into effect in its shops the co-operative plan, generally known as the "Baltimore & Ohio Plan," under which representatives of the employees will share with the management the task of promoting efficiency. Announcement to this effect was made in Montreal on November 21 by S. J. Hungerford, vice-president in charge of operation, following an all-day conference in his office between representatives of the management and officers of the shop crafts unions.

A tentative agreement for the application of the "B. & O. Plan" on the Canadian National was reached some months ago, but final approval was withheld until shop conditions on the system could be carefully studied with a view to ascertaining whether the plan had a reasonable chance of success under conditions prevailing on the C. N. R. This study was undertaken by Captain O. S. Beyer, Jr., consulting engineer for the shop crafts unions, who made the original studies preliminary to the application of the plan on the Baltimore & Ohio and who supervised the first test which was given to the plan in the B. & O. Glenwood shops. Captain Beyer reported to the conference in Montreal on November 21, after which formal agreement for its adoption on the C. N. R. was entered into. Captain Beyer will be in charge of the application of the plan on the C. N. R.

As on the Baltimore & Ohio, the plan will not be applied to the whole system at once, but will first be given a thorough trial in one shop and for this purpose the company's Moncton, N. B. shop has been selected. When it is safely established there, it will gradually be extended to other shops on the system.

The plan (see *Railway Age*, February 16, 1924, page 839, March 8, page 543, and November 8, page 839), briefly, calls for the creation of local shop committees representing the employees who will meet at regular intervals with committees representing local shop managements, each committee having equal representation. There will be, in addition, regional and system committees, the regional committees meeting at stated intervals for the purpose of reviewing the work of and to pass upon or augment suggestions offered by the local committees. The joint system committee will meet at least twice a year, and it will review and advise upon recommendations of the several regional joint co-operative committees and decide upon matters of interest to the system as a whole. The plan provides for full and cordial recognition of the shop unions, according to them constructive as well as protective functions; agreement to co-operate for improved service to the public; fair sharing in the gains of co-operation and the establishment of joint union-management administrative machinery.

Benefits hoped for by management may be summarized as follows: Better workmanship; increased efficiency of production; stabilized production; improved morale; fewer grievances and misunderstandings; saving of material; in-

creased business through aid of employees. From the employees standpoint the benefits look forward to are: Recognition of the unions as constructive in function; steadier work and thus increased annual earnings; improved tools and safer and more sanitary surroundings; better educational facilities; fewer grievances and prompter settlement.

Recommendations for Prevention of Crossing Accidents

THAT grade crossing elimination through co-operation of municipalities, states and railroads, must be the ultimate remedy for the railroad-highway grade-crossing peril is one of the conclusions reached by the Committee on Construction and Engineering of the National Conference on Street and Highway Safety, appointed by Secretary Hoover, in its report to be presented at sessions of the conference at Washington on December 15, 16 and 17. The committee expressed the opinion that automatic train control could not save as many lives as would an equal expenditure on grade crossing elimination. The subject was also considered to some extent in the report of the Committee on Traffic Control, which recommended that "vehicles should not be permitted to exceed a speed of 15 miles an hour when approaching within 100 ft. of any railroad crossing," and that "it should be made a violation of law for a motorist to disobey a clearly visible and positive signal to stop at a grade crossing." This committee also recommended that some other color should be substituted for red for the rear lights of motor vehicles, so as to leave red to be exclusively to indicate immediate danger.

Other conclusions of the Committee on Construction and Engineering were:

Where grades are separated, narrow or obstructed underpasses and sharp turns in the approaches thereto should be avoided. Before improving an important highway which has grade crossings or other serious disadvantages, consideration should be given to the possible substitution of some parallel route.

Crossings at grade should be safeguarded in every reasonable way. Standard warning signs or pavement markings should be supplemented by automatic signals, crossing flagmen or gates, depending on the volumes of highway and rail traffic. So far as possible a clear view along the track in both directions from both sides thereof should be maintained. Sharp curves, abrupt changes of grade, roughness in the pavement or other conditions at or near the tracks which tend to divert the attention of the motorist should be avoided.

For signs and signals, both luminous and nonluminous, the following color indications are recommended, and these colors should not be used for any other purpose: Red for "Stop"; green for "Proceed"; yellow for "Caution," as at curves; purple or some other color as a special cautionary indication at cross roads; white letters or symbols to be used on the red, green or purple background, black on the yellow. Distance and direction signs should be black and white.

Municipalities, states and railroads should join in an energetic campaign to carry elimination work forward as rapidly as funds obtainable will permit. Each municipality, county and state should be at work on comprehensive programs and should be taking steps to provide necessary funds. The work should proceed on state-wide programs which begin with the highways where a given sum will accomplish the most in the interest of safety. From the safety point of view, overcrossings are usually preferable to undercrossings, inasmuch as they are likely to afford motorists a better view and do not need to be obstructed by center columns or curbs.

Many existing underpasses were made before the advent of the high-speed motor car, and are dangerous because of sharp curves, narrow side clearance, and low head room. These danger spots should be eliminated.

Many more new grade crossings are being opened yearly than are at present being eliminated. New railroads or branch lines should, as far as possible, be required to avoid establishing additional grade crossings, and municipalities opening new streets across railroads should realize that even though the traffic expected in the near future would not warrant the expense of grade separation they are creating a new problem to require solution ultimately.

Crossings at grade should be safeguarded by a cautionary signal placed about 300 ft. from the crossing; and this is being supplemented effectively in a number of states by a series of transverse markings. At crossings where the expense of flagmen or gates is not warranted, automatic wig-wag signals are recommended, and to be effective at night such signals should carry a red light. Gatemen and flagmen should be mentally competent and physically able to perform their duties properly.

Transverse ridges in the road, zig-zag turns and various other expedients designed to force the motorist to reduce speed at railroad crossings have proved ineffective and are not recommended. On the contrary, your committee believes the operation of the motor vehicle, particularly on and in the immediate vicinity of the tracks, should be made as simple and easy as possible so that the operator can apply himself to watching for approaching trains. Where the highway is carried up to the level of the tracks by a short steep grade the approaches should be extended and provided with easy vertical curves or level places so that the motorist can stop and hold his car easily within 10 ft. of the railroad if he discovers a train coming. Short sharp descents to the tracks should likewise be cut away to provide easier grades.

Where the crossings are planked, the planking should be firm with a smooth surface. At many crossings driving across at anything other than a very low speed invites a broken spring, while at the low speed there is danger of stalling. Of the many motor cars struck at crossings because the engine stalled, a considerabe percentage might have escaped if the crossings had been smooth.

Approaches to crossings should be relocated where necessary to eliminate sharp curves and junctions with other highways close to the tracks. Trees, shrubs, faces of cuts and all other obstructions to clear view along the tracks in both directions should be removed from the highway and railroad rights-of-way. Railroad stations and other buildings should not be located close to highway grade crossings. Cars should not be spotted on side tracks where they will interfere with the view of motorists; if necessary to avoid this, team or industry tracks should be relocated. Effort should be made to persuade abutting property owners not to obstruct the view either with trees or buildings or with less permanent obstructions. Standing corn has contributed to many accidents.

The chairman of this committee is Frank Page, chairman of the North Carolina State Highway Commission.

The Committee on Traffic Control, which includes in its membership C. L. Bardo, general manager of the New York, New Haven & Hartford, who is chairman of the Committee on Grade Crossing Protection and Trespassing of the American Railway Association; C. J. Goff, vice-president of the Brotherhood of Locomotive Firemen and Enginemen; D. W. Helt, grand president of the Brotherhood of Railroad Signalmen; H. A. Rowe, claims attorney of the Delaware, Lackawanna & Western, who is chairman of the Committee on Prevention of Highway Crossing Accidents, Safety Section, American Railway Association, and H. G. Taylor, president of the National Association of Railway and Utili-

ties Commissioners, had the following to say regarding railroad grade crossings:

Your committee understands that the committee on construction and engineering will recommend * * * that while the grade crossings remain they be safeguarded as far as reasonably possible. Assuming that that committee will recommend the placing of a warning sign a sufficient distance from the crossing, your present committee recommends that a vehicle shall not be permitted to exceed a speed of 15 miles an hour while approaching within 100 ft. of a grade crossing. The purpose of such a restriction is to force the operator to have his vehicle in complete control until reasonably certain that no train is approaching; and at some crossings where the view is obscured safety may demand a much lower speed before proceeding upon the crossing.

Eastern Region, P. R. R., Officers and Men Meet

REPRESENTATIVES of employees and management, equal numbers from both groups, of the Eastern Region of the Pennsylvania—596 in all—attended a banquet at the Bellevue-Stratford Hotel, Philadelphia, on November 25, given under the auspices of the Pennsylvania Railroad's Young Men's Christian Associations to discuss "Some Fundamental Principles Involved in Right Relationships Among Railway Men and Managements." The meeting was similar to one held in the Central Region of the Pennsylvania at Pittsburgh last spring, and is a direct outgrowth of the triennial conference of the Railroad Y. M. C. A. which was held at St. Louis a year ago. Similar meetings have been held on several other railways.

Roy V. Wright, managing editor of the *Railway Age*, presided. The first speaker was G. K. Roper, Jr., senior secretary, Transportation Department, of the International Committee of the Y. M. C. A. Mr. Roper called attention to the widespread representation of different departments—18 in all—at the meeting and then said that the Y. M. C. A. had interested itself in the problem of securing co-operation between management and men because it felt that it knew something about the problem; that the Railroad Y. M. C. A. had always had to depend upon the co-operation of management and men to insure its success and the fact that it had prospered showed that it had learned how to secure this co-operation. The Y. M. C. A., he said, took care of the physical requirements of men but, more than that, it cultivated them spiritually. It knew nothing about the problems of railway wages and working conditions but felt that the application of Christian principles would make the solution much easier. How much better off, he said, the transportation industry, management and men, would be if it were able to show a united front to the country. By the wider application of the principles of Christian friendship which the Y. M. C. A. stood for, the showing of this united front would be possible.

The next speaker on the program was Samuel Rea, president of the system. Mr. Rea addressed the diners as "fellow-workers" and congratulated them on having done their duty well in all the years in which he has been associated with them. He said that the Railroad Y. M. C. A. was not only of potential value but of actual and present value to the railroad. He closed his remarks with a plea for tolerance, especially with the exuberance of youth.

The next speaker was Dr. John P. Munn, chairman of the Transportation Department of the Internation Committee of the Y. M. C. A. He dwelt upon the importance of transportation to the national well-being and said that a railroad man, in performing his duty, not only had the satisfaction of securing thereby a good living for himself and family but the knowledge that at the same time he was doing something worth while for mankind. He agreed with Mr. Rea in his plea for tolerance but said that a spirit of trust was also needed. When men are trusted to do their duty, they will do it. The Y. M. C. A., he said, worked to give men healthy bodies, healthy minds and the proper spirit and insofar as this great effort was successful would the problems of human relationships grow less serious.

General W. W. Atterbury, vice-president of the company, was the next speaker. He remarked the fact that he had been placed upon the program between President Rea and H. E. Core, general chairman of the Brotherhood of Locomotive Firemen and Enginemen, whom he referred to as his "two bosses"—one representing the board of directors and the other the labor organizations. He spoke of the difficulties which had been experienced in labor relationships in the last few years and how the securing of justice did not alone suffice but that men must be convinced that they are getting justice. Faith is necessary. In order, therefore, to secure not only justice but also faith, the Pennsylvania had set up its plan of employee representation with the joint reviewing committees where men and management could be sure of getting a hearing and a judgment which would satisfy them that justice was done. These committees, he predicted, would be the basis of increasingly cordial human relationships.

Mr. Core stated that employees were chiefly interested in fair treatment and fair wages and would concede to the employer what he claimed—a fair return, but, with these concessions it was found that when negotiations actually opened there was considerable disagreement as to definition of what "fair" meant when applied to wages, working conditions and financial return. As long as industries were small, the problem was not serious but with the growth of large enterprise it became dangerous. Lately many plans had been brought forward for the solution of the problem and he considered the plan now in operation on the Pennsylvania as not the least important of these. He outlined some observations he had made of the operations of the joint reviewing committee: At first the members came subconsciously prepared to vote the management way or the employees' way according to which group they represented but now the members were coming more and more to decide questions not from the point of view of the group alone but with the welfare of the whole in mind. He cited the fact that unanimous votes were secured in 210 out of 383 cases which had been docketed with the committee direct as against a much lower rate of unanimity in cases referred from local committees, as showing that members were inclined to approach problems coming to them directly from a point of view of general welfare; the appeal cases, however, gave opportunity for group prejudices to arise. The joint reviewing committee had in three years, he said, handed down 579 decisions of which 302 were in favor of the management, 76 neutral and the remainder in favor of employees. In only 23 per cent of these cases was discipline involved and 243 of the cases were settled by unanimous vote. He looked upon the results accomplished as a worthy achievement and predicted that more and better things would come in the future.

The last speaker on the program was Dr. Charles A. Eaton, chief of the Welfare Department of the General Electric Company and representative-elect from New Jersey. Dr. Eaton told of the old days of railroading when the foreman handled the problem of employee relations with his two fists and compared that with the more enlightened way of today. He spoke of the railroads as the arteries of the country and thought it strange that a man suffering from hardening of the arteries should attempt to improve them by assailing them with a club. He advocated letting the railroads be run by railroad men—keeping an eye on them all the time. "Where are we; whence came we; whither go we"—this he said was

a question which had interested him early in life and his answer was that we were going forward. We were democratizing religion, politics and wealth. More and more good things were being made available for larger and larger numbers of men. This was as it should be, he said, and the captain of industry should be just as interested in seeing his employees doing well financially as he should be in doing well himself—otherwise how could the products of industry find a market. Every man should be interested in doing good work and producing much and should expect adequate payment for his contribution to the national wealth. As this idea received wider and wider acceptance our wealth would increase and better things could have a wider and wider distribution. He pointed to the fact that the United States and Canada settled disputes regularly in a peaceful fashion which in Europe would result in war. This peaceful settlement was possible because these neighboring countries understand and sympathize with each other. Management and men in industry should strive to develop the same spirit of friendly mutual sympathy and understanding.

Mr. Wright, in closing the meeting, expressed the opinion that efforts in this direction were already bearing fruit. In support of this he cited a statement by Dr. David Friday, made before the Silver Bay Industrial Conference, which is quoted in the editorial "Summing Up the Competition on Co-operation" which appears elsewhere in this issue.

Music during the dinner was furnished by the superintendent of car service triple quartette and by the Pennsylvania Railroad orchestra.

Universal Truck Column Anchor

ONE FREQUENT source of trouble with the arch bar truck is the breaking out of the columns on the inside at the top, caused by the repeated hammer blows of the bolster. Moreover, when the brakes are hung from the

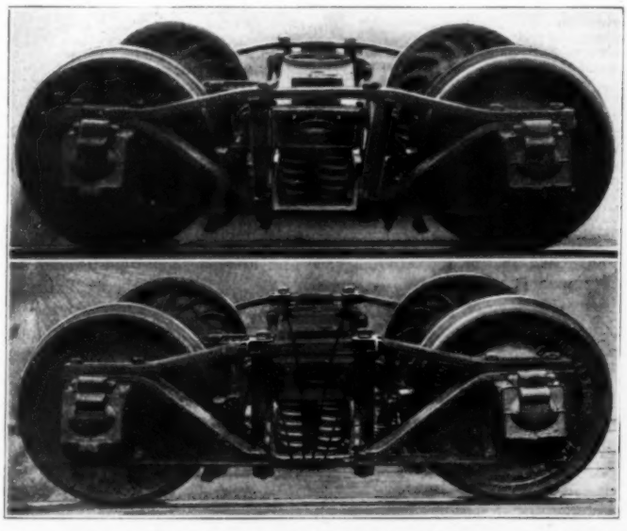


Fig. 1—Arch Bar Truck with Broken Columns (Above); Same Truck with Broken Columns Held in Place by Universal Truck Column Anchors (Below)

columns, the ears or support brackets are not infrequently worn through by the hanger pins or broken off.

The cost of renewing truck columns when broken is considerable, depending on the weight and material from which they are made. Their period of usefulness is said to be greatly extended by the application of Universal truck column anchors, developed recently by the Universal Draft Gear Attachment Company, Chicago. By the use of these anchors the truck columns are supported at the top from the outer face and even if broken out on the inner face, they are still serviceable. In fact, the defective columns, when supported at the top with these anchors, are said to be stronger than new columns without the anchors. In cases where the brake hanger bracket has been broken off, the truck column anchor is provided with an integral brake hanger support, thus making a permanent repair and retaining the old column.

In the upper part of Fig. 1 an arch bar truck is illustrated with all four columns broken out on the inner face as

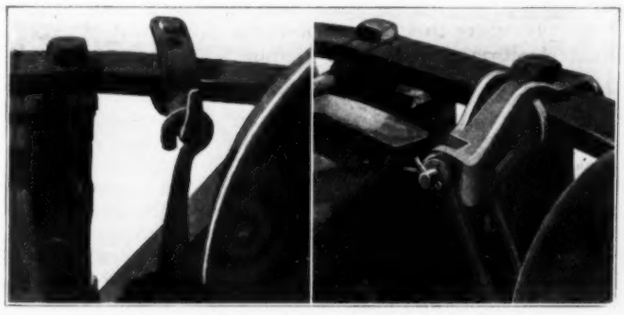


Fig. 2—Temporary Repairs in Case of Broken Brake Hanger Bracket (Left) and Permanent Repairs (Right) by Means of Universal Truck Column with Integral Brake Hanger Bracket

described. The same truck, fitted with Universal truck column anchors by means of which necessary repairs are made and the old columns retained, is shown in the lower half of the illustration.

A truck with temporary repairs in case of a broken brake hanger bracket is illustrated at the left in Fig. 2, and at the right, the method of making permanent repairs by means of a Universal truck column anchor with integral brake hanger bracket.

Supplemental Report on New Iberia Derailment

THE INTERSTATE COMMERCE COMMISSION has issued its report of a supplemental investigation of the derailment of westbound passenger train No. 1 on the Southern Pacific near New Iberia, La., on October 2, 1923, when, because of the failure of the engineman to heed the stop indication of a dwarf signal, the locomotive was ditched at a derail and the fireman was killed. The train, moving at about 18 miles an hour, soon after 8 p. m., was running westward on the eastbound track; but the signalman in charge of the interlocking at the crossing where the derailment occurred, had cleared the signals for the regular or westbound track and apparently the engineman had acted on these signals although knowing he was not on the westbound track. The signalman had cleared the signals because, having no wire communication, he was ignorant of the change which had been made in the routing of the train.

The present report says that on March 1 last, telephone communication was provided for this signal station, and a similar improvement was made at all other main-line interlocking towers; and at New Iberia a split derail has been installed in place of the Hayes derail, with a guard rail to lessen the danger in case an engine should run into the open derail. The new derail is 100 ft. farther from the crossing. The original report on this derailment was abstracted in the *Railway Age* of July 5, page 12.

General News Department

The Pacific Railway Club will have a holiday entertainment on Thursday evening, December 11.

The American Society for Testing Materials has selected the Chalfonte-Haddon Hall, Atlantic City, N. J., as the headquarters for its next annual meeting, which will be held on June 22-26.

Third National Exposition of Power and Mechanical Engineering

The third National Exposition of Power and Mechanical Engineering will be held in the Grand Central Palace, New York, December 1 to 6, inclusive. The exposition will occupy over 150,000 sq. ft. on three floors and nearly 400 exhibitors will be represented. The material to be exhibited will include all types of apparatus for the combustion of fuel and the generation of power in central stations and industrial plants. An important educational feature of the coming power show is a series of nine lectures by leaders in the mechanical field who will deal with developments in the various phases of power and mechanical engineering. The lectures will be scheduled during the week at times that will avoid conflict with the meetings of the American Society of Mechanical Engineers and the American Society of Refrigerating Engineers, which will be held in New York at the same time. The lectures will be supplemented by a program of motion pictures which will contain a large number of new releases illustrating the great mechanical developments of the year.

A Million for Injured Eyes

The New York State Department of Labor reports that in a single year, the 12 months ending with June, 1923, the total payments under the workmen's compensation law of that state, on account of injuries to eyes, amounted to more than a million dollars. The number of cases of permanent injury was 602; compensation $592,705; 12 cases combined with face disfigurement $27,855; temporary disability over 800 cases; cost of lost time not stated. The National Committee for Prevention of Blindness, 130 East 22d street, New York, commenting on this record, says:

"The million dollars paid as compensation for injuries represents only a small part of the economic loss suffered by employers and employees and does not, of course, begin to pay for the human suffering resulting from such injuries. The maximum compensation of $20 a week represents, usually, only a fraction of the injured employee's wage. The employers, in addition to the million dollars paid in compensation, lose thousands of dollars in lowered morale, which is the aftermath of every serious industrial accident. Every serious accident also necessitates the replacement of an old employee with a new worker whose education is costly. . . . The situation in New York is no worse than in other industrial states, possibly a little better than most."

N. K. P.-Chicago Harbor Agreement

The protest of the state of Illinois against the proposal of the New York, Chicago & St. Louis to dredge the harbor at Lake Calumet, Chicago, in return for the right to construct a belt railway around the harbor, will probably be unavailing, according to the opinion of Chicago city officials. It is pointed out that the city obtained from the state in 1913 a grant of the fee of the bed of Lake Calumet and other rights necessary to carry out the proposed improvement. Alderman Guy Guernsey, chairman of the Chicago city council Committee on Harbors, Wharves & Bridges, has expressed his approval of the Nickel Plate plan.

An ordinance embodying the proposal of the Nickel Plate is soon to be introduced before the city council. Under the terms of the ordinance the Nickel Plate will acquire rights to one mile of water front in the northeast corner of the basin, leaving 13 miles of water front for other purposes. South of and to the east of this water front the railroad will acquire 103 acres of land out of a total of 1,451 acres involved and owned by the city, which acreage the railroad will pay for at a value of $2,000 per acre, four times the amount they are charging the city for the land deeded to Chicago in settlement of the road's riparian rights. The railroad will pay for the 103 acres purchased from the city by advancing the money to dig the first unit of the harbor, which will be a channel 200 ft. wide extending the length of the basin. The construction of the railway line around the harbor will be carried on at the same time as the dredging.

Excursion of P. R. R. Veterans

The veterans of the Renovo division of the Pennsylvania Railroad made an excursion to New York Harbor on October 18, a "recreational and educational" trip, and 115 employees and retired employees participated. This excursion, as described in the Pennsylvania News, appears to have been open to all employees of that division who have been in the service for twenty years or more. A group photograph taken after the party had made an inspection trip around New York harbor shows the faces of men who are represented on the payroll under 42 heads, as follows:

Agent (5)
Blacksmith
Boilermaker foreman
Brakeman, yard
Car inspector (4)
Car inspector, retired
Car packer (2)
Car repairman
Car repairman, retired
Carpenter foreman
Carpenter foreman, retired
Carpenter
Chief clerk (5)
Clerk (2)
Clerk, shop
Conductor (2)
Conductor, retired (2)
Crossing watchman
Division accountant
Driver
Engineman
Engineman, retired (4)
Engineer, stationary, retired
Foreman (3)
Foreman, gang (8)
Foreman, telegraph and signal
Janitor, retired (3)
Laborer (3)
Laborer, retired
Machinist, (3)
Machinist, retired
Machinist helper
Mason, retired
Messenger, retired
Oiler
Painter, retired
Pipe fitter
Pipe fitter helper
Plumber
Station master, retired
Store helper (2)
Switchtender, retired
Tallyman (2)
Telegraph operator (2)
Track foreman, assistant, retired
Train dispatcher
Trainmaster, assistant
Yardmaster, assistant

E. B. John, superintendent of the division and president of the Veterans' Association, presided at a meeting held in Hotel Pennsylvania at the close of the day.

C. P. & St. L. Sold in Parcels

Five purchasers took over various portions of the property of the Chicago, Peoria & St. Louis at its sale at public auction at Springfield, Ill., on November 20. The largest part of the road's property was bid in by Attorney I. H. Lehman, representing Sidney E. Borg & Company of New York, the agents for the bondholders of the road. The section to bring the largest amount was the line between Grafton, Ill., and East St. Louis, which was purchased by James Duncan, president of the Litchfield & Madison, who announced that it would be operated as a branch of his road. The prices bid for the 20 parcels of the property amounted to a total of $3,587,500. The representative of the bondholders was the high bidder on the terminal properties at Pekin; the properties at Jacksonville; 22 miles of line between Petersburg and Springfield; real estate in Springfield; eight miles of track between Springfield and Curran; 2,500 shares of stock in the Peoria & Pekin Union and 130 shares of the capital stock of the Missouri-Illinois Bridge & Belt Railway. The total amount paid for these parcels was approximately $790,000.

The following parcels were purchased by Charles H. Jackson of New York: Eight miles of line between Pekin and Manito; 41 miles of line from Havana to Jacksonville; 23 miles of line from Havana to a point one mile north of Petersburg and 20 miles of line from Waverly to Hagaman. George Norris, New York, purchased the following: 19 miles of line from Manito to Havana; 15 miles of line from Curran to Waverly, and 35 miles of line from Hageman to Lock Haven. The rolling stock of the

road, including the interest in locomotives and freight cars held by the Bankers' Trust Company, New York, was purchased by Herbert N. De Lanoie, New York.

Following the auction the representatives of the bondholders announced that there would be no cessation of operation on the lines purchased by him. The other successful bidders did not state what disposition would be made of the portions that they bought.

Honesty in the Street Car Service

"P. R. T."—three letters used in the quotation below, mean Philadelphia Rapid Transit Company, and the article is taken from a periodical pamphlet, issued by that company, telling of its relations with its employees. For two years now the company has paid employees a bonus, called a "co-operative wage dividend," and every employee uses his dividend to buy an interest in a fund that owns shares of the company's stock. The stock, paying 6 per cent, is bought at 60 per cent of its face value, so that the employee-investor gets 10 per cent on his investment. The employees own one-fifth of the entire issue, and they are represented on the board of directors. In connection with a statement of economies accomplished by co-operation, and concerning the general wage situation in other cities the pamphlet contains the following comments on the use of fare-boxes:

"In the early years of the war, P. R. T. installed drop-coin fare boxes in an effort to forestall possible dishonesty on the part of the force which temporarily replaced the men who went into war work. The fare box places the responsibility for fare collection on the accuracy and honesty of the passenger and reduces the conductor to a mere change-maker hopelessly trying to watch myriads of coins dropping into a small glass case.

"P. R. T. men thought the fare box policy against the spirit of the co-operative plan. 'Take off these fare boxes,' they said, 'and let the results speak for themselves as to our honesty and accuracy.' The justice of their plea was recognized, and P. R. T. removed the fare boxes one route at a time. The result in each case was a marked increase in receipts, upholding the contention of the men.

"In the old days of low wages, it was not considered an injustice to deprive the company of a few fares now and again. In fact, managements generally knew of the 'beer and tobacco money' pilfering, which was so general as to be considered by the conductor as his due, and an even split was expected by the motorman at the end of each day's run. Those days are gone, and most companies have replaced the old haphazard method with the drop-coin fare box, fearing the dishonesty of their men, even with good wages.

"P. R. T. does not use fare boxes, preferring to trust to the honesty of its men, which it has taken occasion to encourage in that their wage dividend largely depends upon the collection of a fare from every pasesnger. P. R. T. has found, from observation, that it is easy for passengers in other cities to pass the fare box five times out of nine without paying fare, and that many riders antagonistic to the companies avail themselves of this opportunity. If these conditions prevailed here, the loss would far exceed the money paid to P. R. T. employees in wage dividends which encourage their earnest co-operation in fare collection.

"Where fare boxes are used, the conductor is required to ring up on his register for each person passing the box. The conductor protects himself by actually keeping his register lower than that of the fare box, and tallies the two at the end of the run by ringing up a sufficient number of fares to make both agree.

"P. R. T. observed, during the confusion of the recent change from tickets to tokens, that conductors were finding difficulty in registering each fare as it was paid. Investigation showed that our conductors in such cases played square by turning in the extra money in their possession at the end of the day.

"P. R. T. protects its earnings, first by making the payment of fare a personal transaction between the passenger and the conductor, and thus preventing the passing of passengers without payment of fare; second, by giving its men such an interest in the company's earnings that robbing the company means robbing themselves. Such is the practical value of our co-operative wage dividend, aside from its moral advantage."

Traffic News

The Akron (Ohio) Traffic Association will hold its eighth annual dinner on Tuesday evening December 9, at the Goodyear Auditorium.

The New York State Public Service Commission has further suspended until May 1, 1925, the effective date of a commutation passenger tariff filed by the Long Island to go into effect last July. The tariff would operate to increase by approximately 20 per cent the present fares for family and commutation tickets.

The New York Central and the Boston & Maine have reached an agreement as to the division of through freight rates, and the Boston & Maine has withdrawn from the New England division case which is now before the Interstate Commerce Commission, so far as the New York Central is concerned. The new agreement with the Central does not, however, apply to anthracite coal.

The Illinois Central inaugurated sleeping car service between Chicago and Tulsa, Okla., and Oklahoma City on November 24. The new equipment will form a part of the Daylight Special and will leave Chicago at 11:45 a. m., arriving at St. Louis at 6:15 p. m., at Tulsa at 7 a. m. the following morning and Oklahoma City at 10:45 a. m. Returning the car will leave Oklahoma City at 7:35 a. m., Tulsa at 10:12 a. m., and arrive at Chicago at 7:43 the following morning.

Conference at New Orleans

Shippers and railroad officers are to have a meeting at the Hotel Roosevelt, New Orleans, La., on December 11, 12 and 13. The Southern Traffic League and the Southwestern Industrial Traffic League will hold a joint session on December 11 and the Southeast and Southwest Shippers' Regional Advisory Boards will hold a joint meeting on December 12 and 13.

Central of Georgia Suggests Plan to Secure Settlers

The Central of Georgia Railway endeavors to assist in every movement that means the development of its territory, because it realizes that as the people prosper the railroad prospers; and President L. A. Downs has published an advertisement calling for co-operation in attracting home seekers. This advertisement says, in part:

Experience has taught us that there are many farmers residing in other sections who are interested in the South's undeniable advantages of long growing-seasons, ample rain fall, mild winters, great variety of crops and low priced lands; and to land owners, real estate agents, commercial organizations and others, the company makes the following proposition:

If there are actually for sale within a radius of 8 miles of any and all stations on the Central of Georgia system a total of 200 farms meeting the necessary requirements, the Central of Georgia is willing to advertise these farms in publications which are read by the class of home-seekers desired. The farms must range in size from 40 to 200 acres, except that tracts especially adapted for truck growing may be as small as 20 acres, and those particularly suited for stock raising may be as large as 250 acres.

The farms must be under definite option, running until April 30, 1925, so that there can be no question as to the stability of the price named and this price must be considered reasonable after inspection by representatives of the railway. The terms of sale must require not more than one-fifth cash, as an initial payment, with the balance in 15 or more equal annual payments, at a fair rate of interest. There shall be not less than 10 such farms within a distance of 8 miles from a Central of Georgia station.

The farms must either have suitable improvements or there must be some definite arrangement to finance the construction of buildings * * * One-third to one-half of the land must be cleared and ready for cultivation. * * * We know that this section possesses productive land which can be bought for prices which are relatively low when compared with those in other sections which are successful in attracting home-seekers. For further details write to J. F. Jackson, General Agricultural Agent, Savannah, Ga.

Commission and Court News

Interstate Commerce Commission

The commission has denied the petition of the Port of New York Authority and of representatives of the New England ports for joint consideration with the Shipping Board of the port differential cases.

The commission has cancelled the hearing set for Chicago on November 22 in the Pullman rate case and ordered a further hearing at Washington on December 15 before Commissioner Campbell and Examiner Keeler.

Surcharge Case Submitted

Final arguments in the Pullman surcharge case were submitted to Division I of the Interstate Commerce Commission on November 24. Counsel for the railroads contended that the service rendered to Pullman passengers by the railroads justified a higher charge than that paid by coach passengers and also that, if they were deprived of the $37,500,000 revenue produced by the surcharge, it would have to be made up in some other way, as they are earning less than a fair return. Representatives of the commercial travelers contended that the charge is a discrimination against Pullman passengers; that even if the occupancy in Pullman cars is less than in coaches that fact is offset by the greater density of Pullman traffic per mile, and that the removal of the charge would stimulate travel. Henry Wolf Bikle, for the railroads, said that the surcharge averages 3.3 mills per mile which, added to the basic rate of 3.6 cents per mile, makes a basic railroad charge for the Pullman passenger of less than 4 cents. He pointed out that this addition is about equivalent to the 8 per cent tax on passengers, the removal of which did not stimulate travel, and also that Pullman travel has increased since the imposition of the surcharge faster than has the coach travel. He said he would not suggest that the Pullman rider ought to pay more because he can afford it but that, since he usually can afford it, there is no reason why he should get a preferential rate. As to the examiner's suggestion in his proposed report that the railroads could get additional revenue from the Pullman company to offset the surcharge, Mr. Bikle said that this would necessarily require an increase in Pullman rates and would not benefit the public. J. W. Coleman also argued on behalf of the western roads.

The arguments for the commercial travelers were made by A. M. Loeb, Jr., of the National Council of Commercial Travelers' Associations, and D. K. Klink of the International Federation of Commercial Travelers, who devoted much of their time to criticisms of details of the railroad evidence showing the cost of Pullman and coach travel.

Orient Divisions Case

The Interstate Commerce Commission has made public a report proposed by its Bureau of Finance, recommending a modification of the original order issued in this case, ordering increases in the divisions accruing to the Kansas City, Mexico & Orient on through traffic but of slightly smaller percentages than those proposed in the original order, which the commission was enjoined from putting into effect. Following the sustaining of the injunction by the Supreme Court a rehearing was held for the introduction of further evidence, as a result of which the bureau says in its proposed report that the record justifies the following conclusions:

(1) That the general finding of the former report to the effect that the Orient is a necessary transportation agency, the efficient service of which should be continued in the public interest, should be affirmed; (2) that the Orient is operated with reasonable efficiency; (3) that its report of railway operating income for the year 1923 does not fairly reflect the results of operation, the revenues being abnormally increased by temporary measures and its expenses for maintenance being underestimated; (4) that its expense per unit for the transportation of interstate joint freight traffic has been heretofore, is now, and for the immediate future will be, greater than that of most of its connections for handling the same joint traffic; (5) that the divisions of interstate joint freight rates on traffic interchanged with its immediate connections, hereinafter named, are, and, since September 15, 1922, have been, unjust, unreasonable and inequitable; (6) that just, reasonable and equitable division of such joint rates accruing to the Orient for the period since September 15, 1922, on traffic having origin or destination on the Orient, have been, and for the future will be, not less than the divisions accruing to the Orient on present bases, on traffic interchanged with the immediate connections, respectively, plus the following percentages, except in cases where the division accruing to the Orient is greater than the division accruing to its connection, in which cases the Orient should receive, as its just, reasonable and equitable divisions of such joint rates, divisions which are not less than the divisions accruing to it under present bases, plus the same percentages of the divisions accruing to the said connections:

	Per cent
For the Abilene & Southern	10
For the Atchison, Topeka & Santa Fe	16
For the Chicago, Rock Island & Pacific	14
For the Ft. Worth & Denver City	20
For the Galveston, Harrisburg & San Antonio	16
For the Gulf, Colorado & Santa Fe	20
For the Midland Valley	14
For the Missouri-Kansas-Texas of Texas	14
For the Missouri Pacific	14
For the St. Louis-San Francisco	14
For the Texas & Pacific	14

and that on traffic as to which the Orient is an intermediate carrier the percentages should be one-half of those above named; (7) and that an order should be entered requiring an adjustment of divisions for the past and for the future in accordance with the aforesaid findings.

The record does not support a conclusion that the divisions of interstate joint freight rates on traffic interchanged with the Clinton & Oklahoma Western or the Wichita Falls & Northwestern are, have been or will be, unjust, unreasonable, or inequitable. The line of the last-named company has since April 1, 1923, been operated as part of the Missouri-Kansas-Texas.

It should be understood that if any of the divisions prescribed are believed to operate unjustly, inequitably, or otherwise unreasonably, to the injury of any carrier participating in a joint rate with the Orient, such situation may be called to the attention of the commission for investigating and for such action as may be found proper.

Supreme Court of the United States

Discrimination as to Terminal Facilities

York, Pennsylvania, is served by three railroads. About 100 manufacturing establishments are directly connected with them by industry sidings—most of the plants with only one of the three railroads. Where the plant is thus directly connected with the railroad which has the line-haul, no charge is made for switching the car. Where, in order to reach the plant the car must move for a short distance over the line of another carrier, all of the plants except 17 within a small zone of the city must pay a switching charge. The more favored treatment accorded by the Pennsylvania and the Western Maryland to these 17 was held by the Interstate Commerce Commission to constitute unjust discrimination as against shippers without the zone and the customary order to remove the discrimination was made. (Mfrs. Assn. of York v. Pennsylvania, 73 I. C. C. 40). The Western Maryland acquiesced in the order. The Pennsylvania brought suit against the United States to enjoin its enforcement. The commission intervened as defendant. The case was heard before three judges on motions to dismiss. The court, Judge Witmer dissenting, entered a final decree granting the relief prayed for. 295 Fed. 523. The case was taken to the Supreme Court of the United States on direct appeal; and that court has reversed the decision of the district court, and sustained the commission.

It points out that the order complained of does not require an extension of trackage rights, an enlarged common use of terminals, or the establishment of through routes and joint rates, or the withdrawal of any of them, which could not be ordered except upon the findings and conditions prescribed in the Interstate Commerce Act, as amended by the Transportation Act. The order requires only that the carriers shall desist from a practice which involves such use as has resulted and will result in the undue prejudice found. It leaves them free to remove the discrimination by any appropriate action. To accomplish this, it is held unnecessary that the Pennsylvania should grant to the other carriers the extensive use of the terminal facilities and tracks which was sought in the proceedings before the commission, and which the commission found was not shown to be in the public interest.—United States v. Pennsylvania. Decided November 17, 1924. Opinion by Mr. Justice Brandeis.

Labor News

Wage increases of from two to five cents an hour have been awarded by the Missouri-Kansas-Texas to its shopmen in several classifications.

The Coal River Collieries Company, which is owned by the Brotherhood of Locomotive Engineers, is now operating two of its four mines in West Virginia and eastern Kentucky on an open shop basis under the 1917 mine wage scale. The other two mines are still idle.

An agreement whereby shut-downs in the western line shops of the Canadian Pacific were not to exceed two days in November nor three days in December and the following months, was made at a recent conference between officers in charge of rolling stock on the western lines and representatives of the Federated Shop Crafts.

Appeal Against Order to Testify

Donald R. Richberg, counsel for D. B. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen, forwarded an appeal to the United States Supreme Court on November 20, against the order of the United States District Court at Chicago that Mr. Robertson appear and testify before the United States Railroad Labor Board. Thus, the long expected test of the powers of the labor board under the Transportation Act was carried another step forward towards its conclusion. The power of the labor board to compel attendance and testimony at its hearings was upheld by Federal Judge Wilkerson at Chicago in a decision handed down on November 6. Mr. Robertson had refused to testify before the board in the hearing of the dispute between the western railways and their engine service employees, in which the board had assumed jurisdiction upon the request of the railways' representative.

In filing an answer, in the District Court at Chicago, to the application of the labor board for an order to compel J. McGuire, chairman on the Chicago & North Western of the Brotherhood of Locomotive Engineers, to testify in the wage hearing, Mr. Richberg disclosed that 14 railroad labor organizations had protested to the President on April 6, 1923, against the retention of B. W. Hooper as chairman of the labor board.

Conciliation Board Refuses to Raise Wages in Western Canada

The Board of Conciliation named by Hon. James Murdock, Minister of Labor, to deal with the dispute between the Canadian Pacific Railway, Western Lines, and certain of its employees has found that the application for a general wage increase should be postponed until some future date. The groups of men affected included clerks, freight handlers, baggagemen, storemen, the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees.

With Travers Sweatman, representing the employers dissenting, the Board found that the following amendment asked by the men should be granted:

"That in the event of any of the specific holidays falling on a day that an employee is given in lieu of Sunday, such employee will be allowed a day off in lieu of same or be given an extra day's pay."

The board was unanimously of the opinion that hourly rated employees required to report for duty should be paid a minimum of three hours at pro rata rates, for which three hours' service may be required, provided, however, that if required to report for duty on their day off or regular holidays, the minimum of three hours at pro rata rates shall be for two hours' service or less.

The board recommends that in any reduction of forces, seniority of service shall govern.

The employees put forward an application to insert into their agreement the following amendment, which was approved by the board, with Mr. Sweatman dissenting: "After one year's working service, monthly rated employees will be allowed 12 days' vacation with pay, each year. When a statutory holiday falls within the prescribed 12 days, an extra day will be allowed."

The report states that the board is in favor of allowing an amendment put forward by the men, providing that no reduction in pay will be made in the case where a man who has been in the service one year, and less than two years, on account of bona fide sickness, provided that his work is kept up by other employees. The proposal provided for a larger number of days' illness, with pay, for men who have been longer in the service.

The board agree unanimously that employees on leave of absence will, after three months, lose their seniority unless there has been a mutual agreement between the company officers and representatives of the men.

More Clerks Ask Wage Increases

The Railroad Labor Board on November 20 heard arguments presented by the Brotherhood of Railway & Steamship Clerks, Freight Handlers, Express & Station Employees, representing the clerical employees on six railways, for wage increases ranging from five to thirteen cents an hour. The roads involved in this hearing for various reasons were not participants in the case which came up before the Labor Board on October 8 when the clerks sought wage increases on 40 railroads in all parts of the United States. The petition for the wage increases was carried to the Labor Board by the clerks' brotherhood when the campaign for general wage increases, inaugurated last spring, met with little success. On the lines which granted increases last spring advances of from two to five cents an hour were accepted by the employees.

Representatives of the following railways participated in the latest hearing: the Erie, the Missouri Pacific, the Great Northern, the Indianapolis Union, the Minneapolis & St. Louis, and the Spokane, Portland & Seattle. If the proposed increases are granted, the wages of the clerical employees will approximate the peak level of wages paid under the Labor Board's Decision No. 2 in 1920.

Testimony in the dispute on the question of a change in working rules for clerical employees on the Minneapolis & St. Louis was also taken at the session of the Labor Board on November 20.

Southern Pacific Enginemen Take Strike Vote

The enginemen on the Southern Pacific (Pacific System) have taken a strike vote as the result of the refusal of the management to renew direct negotiations with the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen and Enginemen on the request of the brotherhoods for general wage increases. The Southern Pacific has refused to reopen the discussion with the brotherhoods since it is one of the participants in the case now pending before the Labor Board, at which the representatives of the brotherhoods refused to testify. As a countermove to the Labor Board's efforts through the federal courts to compel the representatives of the employees to testify, both of these brotherhoods have made strenuous efforts to negotiate agreements with the roads involved in the dispute before the labor board, in order to prove that the labor board's intervention in the case was unjustified. The brotherhoods assert that there was no danger of interruption to commerce and claim that agreements could be reached. This effort has been concentrated particularly on the Southern Pacific, but the management has steadfastly refused to agree. That the brotherhoods propose to attempt to enforce their demands by a strike was indicated in an article by D. B. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen, which appeared in that organization's magazine for November. This article related the difficulties which were being met on the Southern Pacific and indicated that the executives of the brotherhoods intended to take any steps that might be found necessary to force the Southern Pacific to agree to the brotherhoods' demand.

A JOINT CONFERENCE of shippers and carriers in the Western Trunk Line territory was held at the Hotel LaSalle, Chicago, on November 24, to consider proposed changes in rates in the Western Trunk Line territory. While the shippers are not opposed to a revision in these rates, they maintain that the increases proposed by the carriers are excessive and have asked the carriers to permit them to study the data on which they based their decision that an increase in rates was necessary.

Foreign Railway News

Ruhr Railways Returned

The Franco-Belgian Régie, which has been operating the Ruhr railways since the occupation of this area by French and Belgian troops, has turned these railways over to the German Government Railway Company (Reichseisenbahn Gesellschaft) which is to operate the German railways under the Dawes plan. The Régie relinquished control before the date required under the agreement.

An English Appreciation of the Locomotive Engineman

The Times (London) following the death of the engineman in a derailment of a passenger train on the London, Midland & Scottish on November 3, published the following editorial under the heading, "The Engine-Driver":

"Amid the general grief for the loss of life in the railway accident at Moss Side, many men and boys will be specially moved at learning that among those killed was the engine-driver. Most living men numbered engine-drivers among the heroes of their childhood. When asked what we wanted to be when we were grown-up we replied without hesitation: 'An engine-driver.' To be a guard would be good: guards have whistles; and they live in vans into which we are forbidden to go; vans full of delightful packages and parcels; with perhaps a mysterious wheel which we longed to turn; very likely a big dog chained to the wall. But the guard could not hold a candle to the engine-driver, the man who owned and commanded and rode upon the very biggest toy in the world. Ships, which are very fine toys, have too many people playing with them. The engine-driver, with his squire, the fireman, to enhance his dignity, was magnificently alone. The driver of a motor-car and the airman are enviable; but a motor-car is not nearly so large and so self-revealing a toy as a railway engine; and the airman is boxed up till we cannot see what he is doing, even when his machine is close at hand. It is the mixture of mystery and plainness in the engine-driver's task which makes him, to the mind of childhood, the most enviable of men. And something of that childish feeling persists through life. There are moments when the gravest and maturest of us still feels that he would like to be an engine-driver, to stand in the cabin, to turn wheels, and push handles, and to be captain of the monster that goes roaring through the daylight or the darkness. We like, before we start on a journey, to have a look at the engine and at the man who is lord of it. And at the end of a journey we sometimes feel that we should like to do what the business man in the advertisement is seen to do: shake the hero of our boyhood by the hand and thank him for the good run.

"If many of us did it, he might be embarrassed, and even kept from his tea. Yet the sentiment that prompts the action is a good one. Man is a creature so adaptable, and modern life seems in general so safe, that we do not realize how much greater its dangers are than those of simpler times. We do not notice them, because they are concentrated. In primitive ages danger was universal. Wild beast or human foe made every moment dangerous; and man was never unaware of his danger. Little by little, danger became concentrated. The general run of life grew safe; danger became compressed into certain moments. And now that the application of science, harnessing very dangerous forces to our service, has greatly increased and intensified danger, the specialization of employment has crowded the control of all that danger into the hands of a few. What we demand of the engine-driver and of the driver of a motor-car we do not stop to think, so great is our familiarity with these very dangerous modes of transport. Only, perhaps, when we take our first flight in an aeroplane do we realize how completely we are at the mercy of the physical and moral qualities of the airman. One slip, one error of sight or hearing, one lapse of judgment, and the danger may prove itself in catastrophe; and even perfect control and presence of mind may be betrayed by a flaw in material. It is not good to let such considerations make us nervous; but, especially now that one more brave man has gone to his death, it is good to be grateful to those who, with no fuss or display, take upon themselves the responsibility for our safety, and quietly shoulder the general danger."

Equipment and Supplies

Locomotives

THE CENTRAL OF NEW JERSEY is inquiring for 10 Mikado type locomotives.

THE LEHIGH & NEW ENGLAND is inquiring for from 5 to 8 Consolidation type locomotives.

THE MICHIGAN CENTRAL has placed an order with the American Locomotive Company for the building of an experimental Pacific type locomotive.

THE TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS, reported in the *Railway Age* of November 15 as inquiring for 15, 8-wheel switching locomotives, has ordered this equipment from the Baldwin Locomotive Works.

Freight Cars

THE WABASH is inquiring for 400 gondola car bodies.

THE GREAT NORTHERN is inquiring for two flat cars.

SWIFT & COMPANY is inquiring for 100 steel underframes.

THE ALLIS CHALMERS MANUFACTURING COMPANY is inquiring for 6 hopper bottom gondola car bodies.

THE KISI TSI RAILWAY of China is inquiring through the car builders for 40 steel box cars of 40 tons' capacity.

THE UNITED STATES RUBBER COMPANY has ordered 3 tank cars of 10,000 gal. capacity from the General American Tank Car Corporation.

THE VIRGINIA SMELTING COMPANY, Boston, Mass., has ordered from the General American Tank Car Corporation 2, class 5 tank cars, for carrying sulphur dioxide.

THE NEW YORK, CHICAGO & ST. LOUIS, reported in the *Railway Age* of November 22 as inquiring for 200 underframes, has ordered this equipment from the Pennsylvania Car Company.

THE GREAT NORTHERN, reported in the *Railway Age* of November 22 as inquiring for 1,500 steel underframes, has ordered 1,500 steel underframes for box cars from the Streator Car Company; 1,000 steel ends from the Union Metal Products Company and 1,000 steel roofs from the Standard Railway Equipment Company.

THE CHICAGO & NORTH WESTERN, reported in the *Railway Age* of October 25 as inquiring for 3,200 freight cars has placed orders for these cars as follows: 500 box cars from the Pressed Steel Car Company; 500 from the Bettendorf Company; 500 automobile cars from the Pressed Steel Car Company; 500 from the American Car & Foundry Co.; 500 stock cars from the Illinois Car & Manufacturing Co.; 500 flat cars from the Standard Steel Car Company and 200 refrigerator cars from the American Car & Foundry Co.

Passenger Cars

THE CHICAGO RAPID TRANSIT COMPANY has ordered 100 elevated cars from the Cincinnati Car Company.

THE CENTRAL OF NEW JERSEY is inquiring for 23 steel coaches, 5 steel combination passenger and baggage cars and 2 steel club cars.

THE PENNSYLVANIA has ordered two combination passenger and baggage gasoline motor cars and one trailer car from the J. G. Brill Company.

THE BROOKLYN CITY RAILROAD has placed orders for 335 street cars with the following companies: J. G. Brill Company, 150; St. Louis Car Company, 100; and Osgood-Bradley Car Company, 85.

Iron and Steel

THE ERIE has ordered from the American Bridge Company 1,200 tons of steel for use at Paterson, N. J.

Machinery and Tools

THE GRAND TRUNK has ordered one crane with a 4-ton grab bucket from the Shaw Electric Crane Company.

THE CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS has placed orders for a car wheel borer, a car wheel lathe and a combination journal turning and axle lathe.

THE SOUTHERN RAILWAY has placed orders for a 5-ft. radial drill and a 6-ft. radial drill; a 53-in. boring and turning mill; 800-lb. steam hammer; 42-in. by 14-ft. planer and two 100-ton bushing presses.

Track Specialties

THE CHESAPEAKE & OHIO has ordered 10,000 kegs of spikes from the Inland Steel Company.

Passenger Cars Ordered, Installed, Retired

Quarter	Domestic orders reported during quarter	No. installed during quarter	No. retired from service during quarter	No. owned or leased at end of quarter	No. under order or being constructed
Jan.-March	972	792	679	54,370	1,586
April-June	330	513	555	54,328	1,450
July-Sept.	173	553	531	54,349	1,231
Oct.-Dec.	328	861	948	54,262	832
Full year, 1923	2,214*	2,719	2,713	———	———
1924					
Jan.-March	559	699	431	54,519	970
April-June	263	698	552	54,668	847
July-Sept.	563	668	544	54,783	791

(1) Details as to orders from *Railway Age* weekly reports. Figures include all domestic orders placed with builders and railroad shops.
(2) Figures in remaining columns from Car Service Division, A. R. A. quarterly report of passenger cars, Form C. S. 55 A. Figures cover only Class I roads reporting to Car Service Division and are not therefore strictly comparable with figures given in first two columns of table.

*Corrected figures.

Bookings of Steel Castings

The Department of Commerce publishes a tabulation of monthly bookings of commercial steel castings based on reports by companies representing over two-thirds of the commercial castings capacity of the United States. The report for October shows bookings of 66,697 tons, of which 31,130 tons, or nearly one-half, was for railway specialties.

The following table shows the bookings of commercial steel castings for the past sixteen months by 70 identical companies, with a monthly capacity of 100,700 tons of which 39,100 tons are usually devoted to railway specialties and 61,600 tons to miscellaneous castings.

BOOKINGS OF COMMERCIAL STEEL CASTINGS.

Month	Total		Railway specialties		Miscellaneous castings	
	Net tons	Per cent of capacity	Net tons	Per cent of capacity	Net tons	Per cent of capacity
1923						
July*	54,316	53.9	17,390	44.5	36,926	59.9
August	52,805	52.4	19,103	48.9	33,702	54.7
September	49,401	49.1	22,374	57.2	27,027	43.9
October	39,651	39.4	10,641	27.2	29,010	47.1
November	42,008	41.7	13,645	34.9	28,363	46.0
December	42,762	42.5	15,600	39.9	27,162	44.1
1924						
January	51,406	51.0	19,572	50.1	31,834	51.7
February	73,138	72.6	35,474	90.7	37,664	61.1
March	100,514	99.8	59,778	152.9	40,736	66.1
April	68,119	67.6	33,151	84.8	34,968	56.8
May	56,801	56.4	28,064	71.8	28,737	46.7
June	48,718	48.4	26,170	66.9	22,548	36.6
July	38,191	37.9	16,244	41.5	21,947	35.6
August	36,363	36.1	14,532	37.2	21,831	35.4
September	62,509	62.1	29,567	75.6	32,942	53.5
October	66,697	66.2	31,130	79.6	35,567	57.7

* Two companies with a capacity of 785 tons per month on miscellaneous castings now out of business.

Supply Trade News

The Sullivan Machinery Company, Chicago, has established a branch office and warehouse in Los Angeles, Cal., at 442 East Third street. **Benjamin P. Lane** is the local manager.

F. W. Glauser, formerly associated with the Mid-Continent Equipment & Machinery Co., St. Louis, Mo., is now manager of the equipment department in the southern territory, with headquarters at St. Louis, for the **Hyman-Michaels Company.**

The **Falls Hollow Staybolt Company,** Cuyahoga Falls, Ohio, in following out a program of improvement in the production of hollow staybolt iron, has installed a new automatic mill which eliminates considerable manual labor and controls the evolution of the finished bar automatically.

The Gibb Instrument Company, Bay City, Mich., has changed its name to the **Gibb Welding Machines Company.** This is a change in name only, and there has been no change in the organization. The company is now engaged exclusively in the manufacture of electric welding and heating machines, and no longer makes instruments.

A. B. Cooper has been appointed sales manager in the Philadelphia district with office in the Widener building, for the **Central Steel Company,** Massillon, Ohio, makers of Agathon alloy steels. Mr. Cooper has been identified with the steel industry for 17 years in both operating and sales work. He was formerly with the Tacony Steel Company and the Penn Seaboard Steel Corporation in the Philadelphia territory.

Arthur R. Olson, whose promotion to acting advertising manager of the **Industrial Works,** Bay City, Mich., was announced in the *Railway Age* of November 22, was born on October 11, 1903, at Cooperstown, N. Dak., and graduated from the Chicago Academy of Fine Arts in June, 1923. On August 6, 1923, he entered the employ of the Industrial Works, at Bay City, as an artist, which position he held until his recent promotion.

Martin Dow Platt, whose promotion to secretary and treasurer of the **Industrial Works,** Bay City, Mich., was announced in the *Railway Age* of November 22, was born on May 4, 1882, at Bay City, Mich., and entered the employ of the Industrial Works on October 23, 1901, as an office boy at Bay City. After holding offices in the accounting and general offices he was promoted to office manager, which position he has held until his recent promotion.

Earnest B. Perry, whose promotion to president and general manager of the **Industrial Works,** with headquarters at Bay City, Mich., was announced in the *Railway Age* of November 22, was born on December 9, 1868, in Prairie du Chien, Wis. He graduated from the University of Michigan in 1889 with the degree of B. S. in mechanical engineering, and on July 1 of the same year entered the employ of the Industrial Works as a draftsman and erecting engineer, which position he held until 1893, when he was promoted to superintendent. In 1895 he was promoted to manager, which position he held until 1906 when he was promoted to vice-president and general manager, which position he held until his recent promotion.

H. H. Perry, whose promotion to manager of the **Industrial Works,** with headquarters at Bay City, Mich., was announced in the *Railway Age* of November 22, was born on October 8, 1894, at Bay City, Mich. He received the degree of B. S. in mechanical engineering at the University of Michigan in 1916, the degree of M. S. at Massachusetts Institute of Technology in 1917 and the degree of M. S. from Harvard University in the same year. He entered the employ of the Industrial Works in June, 1917, and in the following month entered the U. S. Army as a first lieutenant in the Ordnance Department, in which capacity he served oversees from September, 1918, to February, 1919. On March 10, 1919, he re-entered the employ of the Industrial Works as manager's assistant, which position he has held until his recent promotion.

Railway Construction

ATCHISON, TOPEKA & SANTA FE.—This company is calling for bids for the construction of a passenger station at Enid, Okla.

CHICAGO, ROCK ISLAND & PACIFIC.—This company will take bids early next year for the construction of a power plant at Shawnee, Okla.

CHESAPEAKE & OHIO.—This company has awarded a contract to Joseph E. Nelson & Sons, Chicago, for the laying of 17,000 ft. of 12-inch cast iron pipe at Russell, Ky. This project also includes the construction of tank foundations and three water columns as reported in the *Railway Age* of November 15.

ERIE.—This company has awarded a contract to the Bates & Rogers Construction Company, Chicago, for the construction of a viaduct, 600 ft. long, over its tracks at Barberton, Ohio.

EASTERN & WESTERN LUMBER COMPANY.—This company has awarded a contract to J. F. Clarkson, Portland, Ore., for the construction of 21 miles of a standard gage logging railroad from Molalla, Ore., into the timber land of the lumber company.

FLORIDA EAST COAST.—This company has authorized and will during December receive bids for grading on four second tracking projects, a 12.5-mile belt line and a 1.6-mile siding. The second tracking projects total 55 miles and begin respectively at M. P. 9.4, M. P. 290.5, M. P. 304.0 and M. P. 350.6 and will cost in toto approximately $2,800,000. The belt line will be built between Hialeah and Larkin and the siding between Larkin and Kendall. These two latter projects will cost approximately $450,000.

ILLINOIS CENTRAL.—This company has awarded a contract to the States Contracting Company, Chicago, for the construction of Section No. 4 of its 165-mile cut-off line from Edgewood, Ill., to Fulton, Ky. Section No. 4 extends from Benton, Ill., to Big Four Crossing, a distance of 25 miles. The contractors to whom the construction of the seven other sections of the line was awarded were announced in the *Railway Age* of November 15 and November 22.

MISSOURI PACIFIC.—This company has awarded a contract to the Railroad Water & Coal Handling Company, Chicago, for the construction of a fuel oil station at Ewing avenue, St. Louis, Mo., reported in the *Railway Age* of November 1.

NEW YORK, PHILADELPHIA & NORFOLK.—This company and the Pennsylvania have applied to the Interstate Commerce Commission for a certificate authorizing the construction of an extension from a point on Chesapeake Bay near the mouth of Little Creek to Norfolk, Va., 5 miles.

PACIFIC FRUIT EXPRESS.—This company is calling for new bids for the construction of refrigerator car repair shops, paint shop and store shed at Nampa, Idaho, to cost approximately $450,000, as reported in the *Railway Age* of July 5. The bids which were taken on October 18 have been retained for consideration with the new bids.

PENNSYLVANIA.—Tentative plans prepared by this company and the Hudson & Manhattan for a joint railway, tube, trolley and bus terminal at Newark, N. J., have been approved by the city commission of that municipality and the city's director of public works has been authorized to proceed with negotiations with the carriers with the object of putting the plan into final form.

ROSWELL, LUBBOCK & MEMPHIS.—This company which was recently incorporated, plans the construction of a 227-mile railroad in west Texas and New Mexico. Clifford Grunewald and E. C. Noble, Houston, Texas, are two of the incorporators of the company.

SEABOARD AIR LINE.—This company has awarded a contract for the construction of a station of brick exterior at Vidalia, Ga., including a platform 400 ft. long.

TEXAS & PACIFIC.—This company contemplates the construction of a freight and passenger station at Livonia, La.

Railway Financial News

ANN ARBOR.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority nominally to issue $1,530,000 of improvement and extension mortgage 6 per cent bonds.

BANGOR & AROOSTOOK.—*Stock.*—This company has applied to the Interstate Commerce Commission for authority to issue 77,200 shares of stock of a par value of $50 in lieu of and to be exchanged for the outstanding 38,600 shares of a par value of $100.

BUFFALO, BRADFORD & PITTSBURGH.—*Abandonment.*—This company and the Erie have applied to the Interstate Commerce Commission for authority to abandon 1.95 miles of line between Crawford Junction and Alton, Pa.

CENTRAL OF NEW JERSEY.—*New Director.*—G. H. Dorr has been elected a director to succeed Robert E. McCarty, deceased. Mr. Dorr will also serve with C. S. W. Packard as co-trustee of Jersey Central stock held by the Reading Company.

CHICAGO, MILWAUKEE & ST. PAUL.—*Pays Note Before Maturity.*—This company has paid the government $365,000 on a note due January 15, 1925.

CHICAGO & NORTH WESTERN.—*Bonds.*—The Interstate Commerce Commission has authorized the authentication and delivery of $1,904,000 first and refunding mortgage gold bonds, and also $1,656,000 of general mortgage bonds, to be held in the treasury until further order of the commission.

CUMBERLAND RAILROAD.—*Valuation.*—The Interstate Commerce Commission has found the final value for rate-making purposes of the property owned and used for common carrier purposes to be $386,203 as of June 30, 1917, and that of the property used but not owned to be $18,000.

In the *Railway Age*, of November 8, 1924, this item was incorrectly listed as the Cumberland Valley, which system is valued by the Interstate Commerce Commission for rate-making purposes at $15,579,342.

DELAWARE & HUDSON.—*Bonds.*—Kuhn, Loeb & Co. and the First National Bank of New York have purchased, subject to the approval of the Interstate Commerce Commission, $4,600,000 Delaware & Hudson first and refunding mortgage 4 per cent gold bonds, due May 1, 1943, which have been placed privately.

FREEO VALLEY.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Eagle Mills to Princeton, Ark., 25 miles.

GEORGIA & FLORIDA.—*Certificates.*—The Interstate Commerce Commission has authorized the receiver to issue $400,000 of certificates of indebtedness to be sold at not less than 96½.

GEORGIA & FLORIDA.—*Certificates.*—The receiver has applied to the Interstate Commerce Commission for authority to issue $400,000 of 5 per cent certificates of indebtedness to be sold at not less than 96½ for the purpose of refunding underlying bonds.

ILLINOIS CENTRAL.—*Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority for an issue of $12,945,000 of 4½ per cent equipment trust certificates, to be sold to Kuhn, Loeb & Co., at 97⅛.

JACKSON & EASTERN.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to issue $500,000 of 6 per cent bonds.

LAUREL FORK.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Elizabethton to Frog Level, Tenn., 14 miles.

LOUISIANA & PACIFIC.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line from De Ridder Junction to Longacre, La., 8.7 miles.

NATIONAL STEEL CAR LINES.—*Equipment Trust.*—Freeman & Co. has sold $1,000,000 6 per cent equipment trust gold certificates, series F, unconditionally guaranteed by endorsement both as to principal and dividends by the Transcontinental Oil Company, due 1925 to 1932 inclusive, at prices to yield from 4.25 per cent to 6.10 per cent according to maturity. The certificates are to be secured by a first lien on 905 standard steel tank cars used in the distribution of the products of the Transcontinental Oil Company. These cars are appraised in excess of $1,500,000 or 150 per cent of the face value of the certificates to be issued.

NEW ORLEANS, TEXAS & MEXICO.—*Equipment Trust.*—The Interstate Commerce Commission has authorized an issue of $1,740,000 of equipment trust certificates to be sold at not less than 98.46.

NEW YORK, NEW HAVEN & HARTFORD.—*Refunding Issue.*—The following statement was issued by the New Haven on November 25:

The outstanding debentures of the New York, New Haven & Hartford Railroad Company's 15-year European Loan of 1907 aggregate $22,997,766.15, which become due April 1, 1925. To refund or to obtain funds for their purchase and retirement the railroad company proposes to issue $23,000,000 principal amount of its 15-year secured 6 per cent gold bonds to be dated April 1, 1925, to be payable April 1, 1940, but redeemable at 105 per cent on any interest date by operation of a sinking fund of 2 per cent annually, or by call, or both, at the option of the railroad company. These secured gold bonds will bear interest at the rate of 6 per cent per annum, payable semi-annually on April 1, and October 1 in each year without deduction for any tax or taxes which the company may be required to pay or deduct therefrom under or by reason of any present or future law of the United States or of any taxing authority therein. These bonds will be issued in the form of coupon bonds of the denomination of $100, $500 and $1,000, and of such other denominations as the company may determine, also of registered bonds of the denomination of $1,000, $5,000 and $10,000; the coupon and registered bonds being interchangeable.

These bonds are to be issued under a collateral indenture with a trust company whereunder the railroad company will pledge as security $23,000,000 principal amount of its first and refunding mortgage 6 per cent gold bonds, Series F, dated April 1, 1925, payable April 1, 1940, issued under and secured by the first and refunding mortgage of the railroad company dated December 9, 1920. Beginning November 1, 1925, and on each semi-annual interest date thereafter, the railroad company will pay to the trustee as a cumulative sinking fund to purchase the bonds as not exceeding 105 per cent and accrued interest or to the redemption of bonds selected by call at such price, 1 per cent of the principal sum at any time issued, and in addition an amount equal to the interest upon the bonds acquired for the sinking fund by purchase or call. It is calculated that this will retire over half of these bonds before their maturity on April 1, 1940. In the meantime the entire $23,000,000 of first and refunding mortgage bonds, series F, will remain with the trustee as security for the remaining bonds. These bonds will be part of the company's first and refunding mortgage which covers all of its physical property, its entire ownership of the stock and bonds of the New England Steamship Company, of the stock of the Hartford & New York Transportation Company, of the Harlem River & Portchester Railroad Company, which owns the valuable freight terminals at Harlem River in the Bronx, and of all but six shares of the stock of the Central New England Railway Company owning the Poughkeepsie Bridge route. The mortgage also covers the company's leasehold of the Old Colony, Boston & Providence, Providence & Worcester, Norwich & Worcester, and Holyoke & Westfield Railroad Company and their respective properties, also the perpetual right to enter New York City over the tracks of the New York & Harlem between Woodlawn Junction and 42nd street, and to use and occupy the Grand Central Station up to one-half of its capacity, also the perpetual right to enter and use the South Station at Boston jointly with the Boston & Albany, also the right to enter New York City over the Hell Gate bridge route to the Pennsylvania terminal, and to operate via the Hell Gate bridge route its freight trains by rail and carfloat via Fresh Pond Junction, Bay Ridge and the New Jersey Shore terminals.

The income of the property is steadily improving. The current year will show a substantial surplus over all fixed charges. The company during the last eight years has expended over 65 millions of dollars in additions and betterments, with an increased efficiency and economy in operation as shown by an operating ratio which has decreased from 102.29 per cent in 1920, the last year of federal control, to 77.45 per cent for the period ending September 30 of the present year.

Assurances of subscriptions have been given by large industrial concerns whose continued prosperity is inseparably linked to and dependent upon a policy of improvements and betterments which will insure a continuation of adequate transportation facilities. Subscriptions have also been made by financial institutions and the company's own stockholders and directors, who are confident of the soundness and value of the security offered and of the ability of the company to meet all of its obligations.

The holders of the European loan will be invited to take a portion of their respective holdings in the debentures at par.

In due course the company will issue a circular to the holders of the European loan, inviting them to deposit their debentures under a plan by which the company will offer the holders part cash and part Fifteen-year Secured Bonds for their holdings.

The proportion of cash available for such payment will be stated when the offer is made, but can only be determined when the actual amount of subscriptions received from others is known. The plan will be effective only upon its acceptance by practically all the bondholders.

Equipment Trust.—The New Haven has applied to the Interstate Commerce Commission for authority for an issue of $3,645,000 of 6 per cent equipment trust certificates.

PORT TOWNSEND & PUGET SOUND.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Discovery Junction to Quilcene, Wash., 13.91 miles.

RARITAN RIVER.—*Valuation.*—The Interstate Commerce Commission has found the final value of the property owned and used for common carrier purposes, as of June 30, 1916, to be $1,215,416.

RIO GRANDE CITY.—*Securities.*—This company has applied to the Interstate Commerce Commission for authority to issue and sell $440,000 of first mortgage 6 per cent bonds, $300,000 of interim certificates and $22,000 of common stock for construction purposes.

ST. LOUIS-SAN FRANCISCO.—*Notes.*—The Interstate Commerce Commission has authorized an issue of $3,000,000 of 6 per cent secured gold notes and the pledge of $4,000,000 of prior lien mortgage gold bonds as collateral security.

TOLEDO TERMINAL.—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to issue $500,000 of 4½ per cent bonds and to sell them together with $34,000 now in the treasury to the proprietor lines.

UNION REFRIGERATOR TRANSIT COMPANY.—*Equipment Trusts.*—Lee, Higginson & Co. are offering $1,350,000 series E equipment trust 5 per cent serial gold certificates maturing May 1 and November 1 each year from November 1, 1925, to November 1, 1931, to yield from 4.50 to 5.20 per cent.

Dividends Declared

Atlantic Coast Line.—Common, 3½ per cent, payable January 10 to holders of record December 15.

Chicago, Burlington & Quincy.—5 per cent, semi-annually, payable December 26 to holders of record December 17.

Chicago, Rock Island & Pacific.—Seven per cent preferred, $3.50, semi-annually; six per cent preferred, $3.00; both payable December 31 to holders of record December 5.

Cincinnati, New Orleans & Texas Pacific.—Common, 3 per cent, quarterly; common, extra, 3 per cent; both payable December 20 to holders of record December 1. Preferred, 1¼ per cent, quarterly, payable December 1 to holders of record November 20.

Colorado & Southern.—First preferred, 2 per cent, semi-annually; second preferred, 4 per cent, annually; both payable December 31 to holders of record December 13.

Hocking Valley.—2 per cent, semi-annually, payable December 31 to holders of record December 5.

Illinois Central Leased Lines.—2 per cent, payable January 2 to holders of record December 12.

Trend of Railway Stock and Bond Prices

	Nov. 25	Last Week	Last Year
Average price of 20 representative railway stocks	78.68	77.91	61.72
Average price of 20 representative railway bonds	89.15	88.92	82.43

Vehicular Tunnel Under Hudson River at New York Which Is Nearing Completion

Railway Officers

Operating

George L. R. French, general superintendent of the Rutland, with headquarters at Rutland, Vt., has been promoted to general manager in charge of operation and maintenance, with the same headquarters, the position of general superintendent having been abolished.

R. A. Brimm, inspector of transportation on the Missouri Pacific, with headquarters at St. Louis, Mo., has been promoted to superintendent of the newly created Little Rock division, with headquarters at McGehee, Ark. **G. W. Briece,** superintendent of transportation, with headquarters at St. Louis, has been promoted to assistant to the general manager, with the same headquarters, a newly created position. **D. O. Ouellet,** superintendent of terminals, with headquarters at St. Louis, has been promoted to superintendent of transportation, with the same headquarters, succeeding Mr. Briece. **L. A. David,** superintendent of the Arkansas division, with headquarters at Little Rock, Ark., has been transferred to the St. Louis terminals, succeeding Mr. Ouellet. **A. R. Taylor,** superintendent of the Louisiana division, with headquarters at Monroe, La., has been transferred to Little Rock, Ark., succeeding Mr. David. **R. H. Dwyer,** superintendent of the Northern Kansas division, with headquarters at Atchison, Kans., has been transferred to the Louisiana division, succeeding Mr. Taylor. **C. H. Dunaway,** assistant superintendent of the Omaha division, has been promoted to superintendent of the Northern Kansas division, succeeding Mr. Dwyer, and the position of assistant superintendent of the Omaha division has been abolished. **E. W. Stanley,** assistant trainmaster on the Eastern division, has been promoted to trainmaster on the Omaha division.

Traffic

Edward Howe has been appointed general agent of the Wheeling & Lake Erie, with headquarters at Minneapolis, Minn., a newly created position.

George M. Forrester, traveling freight agent of the St. Louis-San Francisco at Memphis, Tenn., has been promoted to commercial agent, with headquarters at Springfield, Mo., succeeding R. B. Merrick, deceased.

H. H. Sutton, traveling passenger agent of the St. Louis Southwestern, with headquarters at Memphis, Tenn., has been promoted to division passenger agent, with headquarters at St. Louis, Mo., succeeding O. M. Burkholder, deceased.

H. J. Snyder has been appointed general agent of the Atlanta, Birmingham & Atlantic, with headquarters at San Francisco, and **J. H. Digby** has been appointed general agent, with headquarters at Seattle, Wash. These are newly created positions.

A. W. Gill, assistant to the freight traffic manager of the Southern, with headquarters at Cincinnati, Ohio, has been appointed assistant general freight agent, with the same headquarters, and the position of assistant to the freight traffic manager has been abolished.

G. V. Keith, coal and coke representative of the Baltimore & Ohio, with headquarters at Chicago, has been promoted to assistant coal freight agent, with the same headquarters, a newly created position, and the position of coal and coke representative has been abolished.

P. M. Havens, division freight agent of the Cincinnati, Indianapolis & Western, with headquarters at Indianapolis, Ind., has been promoted to assistant general freight agent, with the same headquarters, succeeding **R. B. Kinkaid,** whose promotion to general freight agent was reported in the *Railway Age* of November 15.

Garnett King, assistant traffic manager of the El Paso & Southwestern, with headquarters at San Francisco, Calif., has been appointed assistant to the passenger traffic manager of the Southern Pacific, with the same headquarters, pursuant to the acquisition of the El Paso & Southwestern by the Southern Pacific. **N. Kinell,** assistant general passenger agent of the Southern Pacific, with headquarters at San Francisco, has been promoted to general passenger agent, with headquarters at El Paso, Tex., a newly created position. **J. D. Mason,** general passenger agent of the El Paso & Southwestern, with headquarters at El Paso, has been appointed assistant general passenger agent of the Southern Pacific, with headquarters at San Francisco, succeeding Mr. Kinell. **H. D. McGregor,** assistant general passenger agent of the El Paso & Southwestern, with headquarters at El Paso, has been appointed assistant general passenger agent of the Southern Pacific, with the same headquarters.

Mechanical

R. U. Lipscomb, whose promotion to superintendent of motive power of the Southern Pacific, with headquarters at El Paso, Texas, was reported in the *Railway Age* of November 8, was born on March 5, 1873, at Brenham, Texas. He entered railway service as a messenger boy on the Southern Pacific at San Antonio, Texas, on January 1, 1889, and later served as shop clerk, time keeper and machinist apprentice. After completing his apprenticeship he was employed as a machinist until 1905 when he was promoted to machine shop foreman at San Antonio. Mr. Lipscomb was promoted to general foreman in 1912 and held that position until 1916 when he was promoted to assistant mechanical superintendent of the El Paso division. In 1919 he was promoted to chief assistant superintendent of motive power and equipment of the Texas & Louisiana lines, with headquarters at Houston, Texas, and continued in that capacity until his recent promotion to superintendent of motive power.

Purchasing and Stores

R. C. Arnoll has been appointed purchasing agent of the Rutland, with headquarters at Rutland, Vt., succeeding J. E. Kilborn, resigned.

Obituary

Charles J. Smith, formerly general manager of the Oregon Railroad & Navigation Company, now a part of the Union Pacific, who left railway service in 1890 to engage in other business, died at Seattle, Wash., on November 15.

Charles S. Fairchild, at one time president of the Atlanta & Charlotte Air Line (now a part of the Southern) and a director of the Erie & Pittsburgh (now a part of the Pennsylvania), died at his home in Cazenovia, N. Y., on November 24, at the age of 83.

Edward T. Campbell, freight traffic manager of the Erie, with headquarters at New York, died at his home in that city on November 22, following a short illness. Mr. Campbell was born on November 18, 1857, at Lansingburgh, N. Y., and was educated in the common schools. He entered railway service in February, 1891, as contracting freight agent for the Queen & Crescent Route and in February, 1893, he entered the service of the Chesapeake, Ohio & Southwestern, now a part of the Illinois Central, as chief clerk. In June of the same year he was appointed secretary of the Southwestern freight bureau and in June, 1895, he was appointed chairman of that bureau. He entered the service of the Minneapolis & St. Louis as purchasing agent in August, 1900, and in May, 1902, he became purchasing agent of the Erie, with headquarters at New York. In May, 1909, he was promoted to freight traffic manager at Chicago and in January, 1918, he was transferred to New York, in the same capacity. In April of that year Mr. Campbell was appointed assistant general manager and at the termination of federal control he was appointed freight traffic manager, which position he held up to the time of his death.